DOCUMENT RESUME

ED 290 247 EC 201 708

AUTHOR	Miller, C. Arden
TITLE	Maternal Health and Infant Survival.
INSTITUTION	National Center for Clinical Infant Programs, Washington, DC.; North Carolina Univ., Chapel Hill, Dept. of Maternal and Child Health.
REPORT NO	ISBN-0-943657-14-8
PUB DATE	Jul 87
NOTE	55p.; The work was supported by a Fulbright Award and by a grant from the Ford Foundation.
AVAILABLE FROM	National Center for Clinical Infant Programs, 733 15th St. N.W., Suite 912, Washington, DC 20005.
PUB TYPE	Reports - Descriptive (141) -- Viewpoints (120)
EDRS PRICE	MF01/PC03 Plus Postage.
DESCRIPTORS	Birth Weight; Comparative Analysis; *Death; Foreign Countries; Infants; Neonates; Pregnancy; *Prevention; Preventive Medicine; *Public Health; *Public Policy; *Social Services
IDENTIFIERS	*Europe (West); United States

ABSTRACT

The study examined medical and social services to pregnant women, newborns and their families in 10 European countries and suggested implications for policy and practice in the United States. The 10 countries (Belgium, Denmark, France, Federal Republic of Germany, Ireland, Netherlands, Norway, Spain, Switzerland, and the United Kingdom) tend toward better birth weights and infant survival than does the United States. Important demographic differences between the United States and Western Europe are highlighted and include substantially lower rates of teenage pregnancy, abortion and childbearing in Europe. Key reasons for better European performance are identified as: (1) easily understood and available provider systems; (2) removal of all barriers (especially economic) to services; and (3) linking of prenatal care to comprehensive social and financial benefits. Financing systems for health care varied among countries with insurance and social security programs predominant. Individual chapters look at study purpose, method and sources, national characteristics, maternity related services and benefits, considerations for U.S. policy, conclusion and national synopses. It is concluded that the issue of infant survival is neither medical nor financial but political. (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED290247

EC 201708

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Emily Schrag

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Maternal Health and Infant Survival, by C. Arden Miller, M.D., initiates a new publication series of the National Center for Clinical Infant Programs. This series will publish research reports or analyses concerned with issues of vital importance to the well-being of infants, toddlers and their families. Each report will represent the research and thinking of its author or authors; these do not necessarily represent the collective or individual views of the Board of Directors of the National Center for Clinical Infant Programs.

The production and dissemination of *Maternal Health and Infant Survival* have been made possible by a grant from the Ford Foundation.

A condensed version of this report, with some slight modifications in content, is projected for publication by the Institute of Medicine in its forthcoming report on prenatal care outreach. Additional information is available from Sarah Brown, Study Director, Institute of Medicine, National Academy of Science, 2101 Constitution Avenue, N.W., Washington, D.C. 20418.

© National Center for Clinical Infant Programs
733 15th St., N.W., Suite 912
Washington, D.C. 20005
July 1987
ISBN 0-943657-14-8

Cover photograph by Barbara Young

Maternal Health and Infant Survival

An analysis of medical and social services to pregnant women, newborns and their families in ten European countries, with implications for policy and practice in the United States.

A study from the Child Health Outcomes Project, Department of Maternal and Child Health, School of Public Health, The University of North Carolina.

BY

C. Arden Miller, M.D.
Professor and Chairman
Department of Maternal and Child Health
The University of North Carolina
Chapel Hill, North Carolina 27514

Prepared while serving as Visiting Fellow, Clare Hall, University of Cambridge. The work was supported by a Fulbright Award and by a grant from the Ford Foundation.

Contents

1 Foreword
3 Summary
7 Acknowledgements
9 Purpose of Study
11 Method and Sources
13 National Characteristics
22 Maternity-Related Services
27 Maternity-Related Benefits
29 Considerations for U.S. Policy
32 Conclusion
33 National Synopses
57 Citations

Foreword

The National Center for Clinical Infant Programs welcomes the opportunity to publish Dr. C. Arden Miller's important and sobering report. The health of our nation's children, including the ways in which the United States lags behind other industrialized countries and, indeed, some third world countries, has been the subject of other reports by Dr. Miller and his colleagues in the School of Public Health, The University of North Carolina (1985, 1986). In the present study of perinatal care Dr. Miller not only informs us, he shows us how much we can learn from the experience of other countries. As the subtitle suggests, Miller's analysis of perinatal care in ten European countries has considerable relevance for the task of improving perinatal care in the United States.

Despite the sophistication and excellence of the health care available to many of its citizens, our country seems to lack the will and purpose to assure its availability to all. None of us doubts the importance and rightness of providing good care to pregnant women and their infants. Yet, as Dr. Miller illustrates with hard-headed facts and controlled passion, our performance in the care of vulnerable people is one that should shame us into improving our systems of care. When, as is currently true in the United States, little more than half of practicing obstetricians will see Medicaid patients; when 25 percent of women of prime childbearing age are not protected by either public or private health insurance; when more than 20 percent of pregnant women and a greater proportion of minority women fail to receive early prenatal care, they and their infants are placed at unacceptable risk for disability or death. Poverty status is associated with poor health and underutilization of services relative to need. The health of poverty and minority children has worsened in our country since 1981. The consequences of poor perinatal care are not only tragic in human terms; they are ultimately costly, many times the price of providing good care in a timely manner.

But Arden Miller is no prophet of doom. He believes not only that we *must* improve the care of pregnant women and their babies but that we *can* do so. He gives us many examples of how ten European countries, of diverse cultural and political traditions, are providing such care. The size, complexity and pluralism of our country call for variations in systems of health care. But the basic responsibility, the essential services and the guarantees of access must be made available to all pregnant women and their infants. Dr. Miller's report is an excellent source of information and ideas. It provides constructive guidance as we seek to correct the faults in our system and reduce the threats to health and survival of our nation's babies and the women who bear them.

Sally Provence, M.D.
President, National Center
for Clinical Infant Programs

Summary

"No pregnant woman in Europe needs to ask how or where she will receive prenatal care or who will pay for it."

Birth weights and infant survival are generally more favorable in western Europe than in the United States, a circumstance that has attracted comment from health policy analysts for several decades. Recent adverse trends for several U.S. indicators of maternal and child health have sharpened concern about these issues. Policymakers and the public are wondering just how those countries with the best performance records go about assuring maternal health and infant survival.

This report looks at ten European countries: Belgium, Denmark, France, Federal Republic of Germany, Ireland, Netherlands, Norway, Spain, Switzerland and the United Kingdom. Excluded from the analysis are countries with monopolistic systems of health care and those with populations less than one million.

A review of pregnancy related supports and services in these ten countries suggests that nations with fewer resources than the United States are doing a better job of assuring infant survival. They are achieving outstanding performance records by:

- establishing easily understood and readily available provider systems;
- removing all barriers, especially economic ones, to the full range of services embraced by those systems;
- linking prenatal care to comprehensive social and financial benefits that enable pregnant women and new mothers to protect their own well-being and to nurture their infants.

CHARACTERISTICS OF THE STUDY COUNTRIES

- The populations of the study countries are substantially smaller than the U.S., but this does not mean that comparisons are inappropriate. As implementation of U.S. policies moves increasingly to state levels, the size of many European nations becomes a legitimate counterpart for considering models of care.
- Population density is high in most of the countries, but the exceptions are important. Norway's population is widely scattered among many isolated communities. The average number of prenatal visits varies only between 10 and 14 in all parts of the country.

  Among the study countries the urbanized portion of the population ranges from a low of 57 percent for Ireland to a high of 96 percent for Belgium. Four countries in the study (France, Norway, Ireland and Switzerland) have a less urbanized population than the U.S. (UNICEF, 1987). Study results suggest that favorable pregnancy outcomes can be achieved among both rural and urban populations.
- Comparison of human services between the U.S. and European countries are sometimes discounted on the basis that heterogeneity of the U.S. population complicates delivery systems more than in Europe. That reasoning is weakened by a regard for migrations since World War II into Western Europe from the Middle East,

North Africa and from various former colonies. Many reports confirm that pregnancy-related utilization of services and pregnancy outcomes for immigrant women are less favorable than for authochthonous populations, but the gaps are neither great nor consistent. A study in West Germany demonstrated that perinatal mortality rates among Turkish immigrants were similar to the German population of the same socioeconomic status.

- The most important demographic difference between the U.S. and the ten European nations is the age-specific fertility rate. Rates for teenage pregnancy, abortion and childbearing are substantially lower in Europe than in the U.S. Findings from the Alan Guttmacher Institute suggest that age of onset of sexual activity does not vary greatly among these countries, but the U.S. differs with more limited access to contraception and less participation by children in organized programs of sex education.

  A dramatic decline in European rates of teenage childbearing took place during the 1970s when the U.S. rate remained high. The low level of teenage childbearing in Europe occurred in the context of extensively expanded medical and social benefits for pregnant women including income supplements to help with the expense of child rearing. These expanded benefits did not induce teenagers to increase their fertility in order to take advantage of financial benefits.
- All countries in the study have lower rates of low birthweight than the U.S. When the U.S. rates are disaggregated according to race the U.S. rate for whites is still substantially higher than the rates of the study countries.
- The per capita gross national product (GNP) in the U.S. and in Western Europe is exceedingly favorable, but it does not independently account for low infant mortality rates. A three-fold difference in per capita GNP separates the European countries with the lowest values from those with the highest. The U.S. GNP is higher than for six nations with better records of infant survival.

  The gap between rich and poor people is greater in the U.S. than in any country except France, for which recent data are not available. Without in any way minimizing the urgency for reducing poverty rates, especially in households with children, a compelling case can be made that selective and direct approaches for improving pregnancy outcomes are both feasible and desirable even within the present income structure of the U.S.
- No country in the study spends as high a proportion of gross national product on health care as the U.S. Countries that emphasize insurance systems to reimburse private physician providers on a fee-for-service basis tend to spend more than countries that compensate providers at a negotiated fixed per capita rate or those that make extensive use of public clinics.

  European countries have emphasized organized community services with decentralized administration under uniform national standards for preventive measures. Increasing responsibility for health services has been placed on local governmental jurisdictions as the role of central government has been strengthened for standard setting, monitoring and overall financing.
- Financing systems for health care are strikingly different among the countries. Insurance and social security schemes predominate, with premium payments being made both by employers and by workers as wage deductions. The unemployed are invariably covered as a public responsibility. Insurance may be government run or controlled, predominantly private, or a combination of public and private systems. In four countries, all of which rely predominantly on office-based practitioners for primary care, financing comes entirely or in large part from general tax revenues.

  This diversity should not obscure a theme common to all countries. No matter what the financing system, even when private intermediaries participate extensively, central government has defined the services that are to be provided and in the instance of maternity care has in every country removed all barriers to those services. The full range of perinatal services is provided without charge to women of all socioeconomic levels, with only a few minor fees that are readily waived in the event of need.

MATERNITY-RELATED SERVICES

- In several countries the usual, procedure is for a pregnant woman to seek prenatal care from a general practitioner or obstetrician of her choice. In Denmark and the U.K. every person

is registered with a general practitioner who serves as a gatekeeper to other services. In the Netherlands a woman first contacts a general practitioner and then makes a decision to continue that care or be transferred to a privately practicing midwife. In Ireland and Spain women may seek care from an obstetrician or general practitioner of choice, but recent emphasis has focused on the use of multidisciplinary primary care public clinics.

- Midwives are extensively involved in European maternity care. Their work is ordinarily confined to hospitals and to rendering prenatal care in multidisciplinary clinics, except in the Netherlands where midwives are independent office-based practitioners.
- Public clinics are sometimes regarded as an available alternative to office-based physician practice. For example, in Norway each municipality is required to maintain at least one public multidisciplinary health center even though care by office-based medical practitioners may be readily available. In some other countries multidisciplinary public clinics have been developed in selected locales to enhance services for hard-to-reach populations.

  Several countries have either phased out public clinics or have elected not to develop them in the belief that access to physicians' offices is both assured and universally utilized. Only two countries in the study pursued a recent policy that dramatically extends public clinics and relies on them as a multidisciplinary focus for primary medical care, including perinatal care.
- The officially required or recommended number of prenatal visits for the uncomplicated pregnancy varies enormously (4 to 12). The average number of visits actually made closely approximates or exceeds the recommendations.
- Home visiting is a feature of nearly every country's maternity care, more consistently practiced after delivery than as a part of prenatal care. Postnatal home visiting in the Netherlands is a central theme of maternity care. Every woman is visited at home either by the midwife or general practitioner who attended the delivery. In addition a specially trained maternity home helper stays at home with the mother and infant for up to eight hours a day until the 10th post-partum day.

  In all countries postnatal home visiting is seen as a means for counseling about infant care, for follow-up on the mother's health, for advice on family planning, to initiate or follow-up neonatal screening procedures, and to arrange for additional appointments for the infant and mother.
- In two countries financial benefits, payable at the time of delivery, are reported to be withheld if the woman did not participate in a specified number of prenatal visits. In West Germany this practice has been discontinued and the benefits are now rendered without reference to prenatal visitation; only France continues the practice of offering a financial bonus for women who have made at least three prenatal visits.
- Another way of considering incentives regards the full range of benefits and supports, not all of them financial, associated with childbearing as an incentive to enroll in prenatal care. Benefits and services include: transportation privileges; early booking for delivery in the hospital of the woman's preference; paid leaves from employment; birthing bonuses; family allowances; home visitors who counsel, instruct and even help with the shopping and housework; preferences in housing; and children's allowances to help with the costs of child rearing. All these are powerful incentives to register the pregnancy and impending delivery with the appropriate agencies, procedures ordinarily accomplished at the first prenatal visit.
- The proportion of home deliveries has declined everywhere and remains high only in the Netherlands, where it represents officially supported policy. The Dutch insurance system will not compensate for an obstetrician's services or for a hospital delivery in the absence of a specific medical indication from an authorized list.

  The Netherlands provides arrangements for deliveries that are neither fully hospital nor home based. A polyclinic delivery allows a woman and her birth attendant to arrange for delivery on hospital premises, and to stay for up to 36 hours, then to return home for the usual pattern of home visiting. The delivery is not recorded as a hospital admission and hospitals are not compensated on that basis.
- Caesarean section rates are consistently lower (half or less) than in the U.S. where in 1985 it was 23 percent.
- Continuity of care in the sense that one provider attends the same patient throughout the prenatal,

intrapartum and postnatal periods is not a prominent feature in any of the countries. Communications among the various providers are facilitated by having the woman carry her own record or part of it.

- Every country provides paid maternity leaves and sets protective limits on the working circumstances for pregnant women. Usual practice in most countries is to transfer women to non-strenuous jobs as soon as pregnancy is confirmed. Night work for pregnant women is forbidden. The duration of usual maternity leave varies from a total of 9 weeks to 29 weeks. In most countries the leave is obligatory. In Norway the father may take up to 12 weeks paid postnatal leave if he is the principal care giver; the Federal Republic of Germany allows either parent to take postnatal leave.

  The amount of pay during maternity leave varies from 100 percent to a fixed payment regardless of salary.

  The source of funds for the payment of leaves varies considerably. It is more often from social security or health insurance funds than directly from the employer, a circumstance that may mitigate employment discrimination against women of childbearing age.
- Maternity grants or bonuses, without means testing, are paid at the time of childbearing in all countries except Denmark. The payments are intended to assist with the cost of supplies and equipment for the new baby.
- In all countries family allowances are paid for each child on a monthly basis, ordinarily until adulthood or until completion of education.

No circumstance of demography, of personal or national finance, or of traditions that attach to providing and paying for health care preclude approaches that assure appropriate perinatal care for every pregnant woman. The strategies for providing that assurance are well described. Careful studies have shown that such an approach would in the long run save public expenditures rather than increase them.

The diversity of approaches in Europe is reassuring. Society can care for all pregnant women and newborn infants while at the same time protecting other interests. Exemplary and equitable systems of maternity care can be implemented in ways that preserve a woman's choice of provider, acknowledge the predominance of physician providers, preserve a private and voluntary orientation to health care, maintain a role for private insurance, and encourage a governmentally decentralized mode of implementation. These are all circumstances that would require attention under a U.S. system of universal participation in comprehensive perinatal care.

Acknowledgements

This report is made possible by the generosity of The University of North Carolina in conferring a Kenan leave of absence, by the Board of Foreign Scholarships of the United States Information Agency in granting a Fulbright Award, by the Ford Foundation for supporting travel costs through a grant to the UNC Child Health Outcomes Project, and by many colleagues in Chapel Hill and in Europe for their help and encouragement.

Members of the Department of Maternal and Child Health, The University of North Carolina were especially helpful by assuming extra burdens occasioned by my study leave, and by providing access to resources in my home University. Earl Siegel, Mary Peoples-Sheps, Trude Bennett, Diane Rogers, and Helen Dark each deserves special appreciation for the additional work they performed on behalf of this study.

The project could not have been undertaken without the help and sponsorship of European colleagues. Dr. Marsden Wagner, MCH Director for the European Regional Office of the World Health Organization, was a fully participating partner. Dr. Eberhard Schmidt, Department of Pediatrics, University of Dusseldorf; Dr. H. P. Verbrugge, Head of MCH and Chief Medical Officer for Health in the Netherlands; Dr. Pierre Buekens of the Free University of Brussels; Dr. I. Alvarez, formerly with Maternal and Child Health Services in the Ministry of Health, now with the Hospital Ramon y Cajal in Madrid; and many new friends at the University of Cambridge all were exceedingly supportive and helpful.

Finally, I am forever indebted to Sir Michael Stoker, President of Clare Hall at Cambridge University for sponsoring my Visiting Fellowship and for providing facilities for study and writing.

C. Arden Miller, M.D.
Cambridge, U.K.
November 16, 1986

Purpose of Study

All industrialized societies make some provision to protect the well-being of vulnerable populations such as pregnant women, infants, small children, the disabled, and the elderly (Roemer, 1976). The scope of protective programs varies widely among nations but ordinarily includes income supplements and improved access to essential health services. The means for facilitating access range from the direct provision of services by agencies of government to various insurance schemes for assisting with the financing of services that are predominantly rendered by private providers. Although the adequacy and forms of protective supports and services vary widely, the ethic is consistent that society at large shares a responsibility for the well-being of vulnerable population sub-groups. This ethic is especially strong, even among less developed nations, when concerned with childbearing (Kamerman, Kahn, and Kingston 1983).

Concern is mounting that in the United States the adequacy of supports and services on behalf of women of childbearing age and their infants is not adequately responsive to their need (Miller et al., 1986). More than 20 percent of all pregnant women and a greater proportion of minority pregnant women fail to receive early prenatal care (National Center for Health Statistics, 1985a). For the nation as a whole 25 percent of women of prime childbearing age are not protected by either public or private health insurance (Gold and Kenny, 1985). The charges for childbearing range formidably between three and five thousand dollars (estimated on average to be $3,100 for a normal delivery and $4,800 for a Caesarean section in 1985; Kenney et al., 1986). Little more than half of practicing obstetricians will see Medicaid patients (Orr and Forrest, 1985).

The infant mortality rate (deaths during the first year of life per 1000 live births in a defined population) is generally regarded as the best statistical indicator for the well-being of vulnerable populations (Newland, 1981). In recent decades that rate has fallen for all nations, but relative rankings for the U.S. have progressively worsened, indicating that many countries are doing a better job than the United States (Children's Defense Fund, 1987). The record is especially worrisome when comparing population subgroups. In the U.S. disparities between blacks and whites and between poor and nonpoor persist and even widen. Since 1981 the proportion of households with children living in poverty has increased, especially for minorities, so that nearly half of all black children under six years of age live in poverty-level households. Poverty status associates with poor health and with underutilization of services relative to need (Starfield and Budetti, 1985).

Other indications of poor performance in the care of vulnerable people include rates of participation of pregnant women in prenatal care, rates of low birthweight among newborns, immunization status of preschool aged children, growth rates among poor children, and iron deficiency anemia among children and pregnant women. All of these measures show trends that have worsened or slowed since 1981. The trends are especially unfavorable among minority and poverty populations, and in

areas of high unemployment (Miller et al., 1986).

These circumstances have generated many proposals for improving the nation's performance, especially for perinatal care (services for pregnant women before, during and immediately after delivery), and for their newborn infants. Congress was responsive to some of these recommendations during the summer of 1986 by liberalizing Medicaid eligibilities and benefits for pregnant women. The Tax Reform Act of 1986 gives further assistance through tax relief to the poor. These improvements, although helpful, are generally regarded as little more than a gesture in the right direction. Most public health experts agree that further supports and services are required, but have not clearly articulated the nature and scope of the programs that are most promising.

In an effort to identify additional programs and policies that deserve consideration in the United States, an analysis of practices among nations that lead all others in infant survival is appropriate. This analysis is undertaken with acknowledgement that international comparisons are complicated by differences in demography, statistical reporting, and in cultural and political traditions. Even though no nation's pattern for health services can reasonably be imposed on another, they represent in aggregate an accumulation of experience with some of the same practices that come under review whenever new policies are considered. Variations on a limited set of strategies have been effective for improving reproductive health and the care of pregnant women. These strategies have been more consistently institutionalized into European service systems than in the U.S. where variations over time and place have been greatly influenced by changes in prevailing political ideologies.

The relevance of experience in European nations may well be questioned in view of the complexity and diversity of needs in the U.S. This relevance becomes more germane when considering that new national mandates for health care in the U.S. are likely to be framed at this time only in the broadest terms, leaving to the states the discretion for developing programs and initiatives that are locally appropriate. Great diversity of programs will emerge, as has happened among the various western European nations. Odin Anderson emphasizes that health services develop out of a country's unique cultural traditions (Anderson, 1972). In the U.S. those traditions may be most influential at state levels, where size and diversity may have greater similarity to some European nations than for the U.S. nation as a whole.

Method and Sources

Data for this analysis are taken from several sources: from a survey conducted in 1982 by the European Regional Office of the World Health Organization in Copenhagen (EURO), from recently reported analyses of that survey, from standard official governmental reports, and from personal interviews. The survey was conducted by a Perinatal Study Group, consisting of 15 members representing 10 countries and 10 professional disciplines (economics, epidemiology, health administration, midwifery, nursing, obstetrics, pediatrics, psychology, sociology, and statistics). The survey results were published during 1985-1986 (World Health Organization, Regional Office for Europe, 1985; and Phaff, 1986). Interpretation of the published findings is complicated by the aggregate reporting of responses from participating countries representing diverse political systems and a broad range of economic and social development. Interpretations are further limited because practices are not in all instances indentified with specific nations. The full list of participating nations is listed in Exhibit 1.

The unedited responses to the perinatal survey were made available through the kindness of Dr. Marsden Wagner, Director of Maternal and Child Health, World Health Organization Regional Office for Europe, EURO, and Dr. Eberhard Schmidt, Chairman of the Survey Subcommittee of the Perinatal Study Group. Responses for France and Spain (not part of the original survey) were not available, necessitating use of additional sources. These consisted of the national reports on the health services of each country, available in the forthcoming WHO *Seventh Report on The World Health Situation.* Further valuable information was made available by Dr. Michele Thuriaux, Chief Epidemiologist for EURO. He opened for review EURO's national files on the study countries. Information about social security benefits for the study countries came from *Social Security Programs Throughout the World,* 1983, Research Report No. 59, US/DHHS, Social Security Administration Office of Policy, Office of Research, Statistics, and International Policy. Valuable data were also taken from *The State of The World's Children,* 1987, UNICEF, Oxford University Press, from the World Bank's *World Development Report 1986,* and from a forthcoming book edited by Kaminski, et al., *Perinatal Care Delivery Systems, Description and Evaluation in European Community Countries,* Oxford Press. The manuscript was kindly made available by Dr. Pierre Buekens, Ecole de Santé Publique, Université de Bruxelles, Belgium.

Visits were made to public officials, academics, and clinics in five of the study countries (Denmark, Federal Republic of Germany, Belgium, Netherlands, and the United Kingdom). Colleagues from these countries and from Spain were invited to comment on this analysis.

Extensive data are available for the relevant issues in most countries, but the tables which follow do not provide consistent information on all countries because of the uneven nature of the survey responses and the absence of supplementary data from other readily available sources. Some deficiencies of data are worth noting in view of

concern about similar deficiencies in the U.S. Scant data are available on the actual content of prenatal visits. The EURO Survey collected data on the prenatal use of various screening procedures (blood group, toxoplasmosis, rubella, tetanus, syphilis, amniocentesis and ultrasound) and the results have been reported (World Health Organization EURO, 1985; Phaff, 1986). Heringa, Huisjes and Buekens, on behalf of the nations of the European Community, conducted a survey among teaching hospitals on the recommended content of prenatal visits. The report provides valuable information on the services that are professionally sanctioned among reporting countries, but provides no information on what is actually done. The differences in national patterns for recommended prenatal care are striking. For example in France and Germany the cervix is routinely examined during prenatal visits; in the U.K.—and the U.S.—such examinations are done only for special indications. The pros and cons of these two approaches have not been evaluated.

Adequate data on the cost of prenatal care and its various components are not available. Even when the aggregate costs of the entire perinatal sequence are reported, comparisons are suspect as some reports appear to include income supplementations that are associated with childbearing, and others appear to confine their reports to medical costs.

To the extent that data are available on cost, it focuses on the use of hospitals. Many countries have attempted to reduce hospital expenses by relying increasingly on home care and out-patient visits. These strategies are considered to be less expensive than hospital care but careful cost benefit analyses, so often discussed in the U.S., are not generally available. An exception is the Netherlands where the expense of the extensive postnatal home visiting program has come under review. That review appears to ask only about the possible disadvantages that might result if home visiting, lasting up to eight hours a day for 10 days (averaging 64 hours total for every delivery in 1986), were reduced to seven days for every newborn. Several reports emphasize that either of these alternatives is less expensive than keeping new mothers and their babies in the hospital beyond 36 hours in the absence of specific medical indications in the postnatal period.

In contrast to studies in the U.S., scant data are available on the timing issues of prenatal care, i.e. the proportion of pregnant women who enter prenatal care in the various months of pregnancy, and the proportion who deliver without an adequate number of visits. Results from the EURO survey revealed that nine of the 23 reporting countries arranged for home visits to non-attenders, but of course this practice can be invoked only for the known pregnancies, ordinarily for women who have made at least the first prenatal visit. Two of the reporting countries (now only one in 1986) withhold financial benefits from pregnant women who fail to make visits. Data from countries that report on pregnant women receiving inadequate prenatal care suggest that their proportion is small: Blondel reported it to be less than two percent in all Western European countries except for Greece (15 percent) and Italy (10 percent) (Blondel, forthcoming).

Experts who were consulted in the study countries consistently held that late or non-attendance for prenatal care is not a serious problem. Women who become pregnant and who continue their pregnancies do not face a barrier of access. They desire health care and desire the benefits that attach to reporting the pregnancies to official agencies.

National Characteristics

The Perinatal Study Group disaggregated the survey responses according to characterizations of each country's health care systems as monopolistic, pluralistic, or intermediate. These designations are shown in Exhibit 1. Monopolistic systems of health care were identified as those in which "... pregnancy and birth care is offered exclusively through institutions such as health centers and maternity outpatient and inpatient departments. In these institutions all personnel are employed by the state" (World Health Organization, Regional Office for Europe, 1985, pp. 7-8). Pluralistic health care systems were characterized as those in which "... care during pregnancy and birth is provided by midwives and doctors in private practice and, to a lesser extent, through institutions. The woman is relatively free to choose the type of care she wants" (ibid, p. 8). Intermediate systems retain features of both extreme systems.

Some differences are worth noting among the countries with each of the three systems of health care. Using ratios of population to health related resources the countries with monopolistic systems have greater concentrations of physicians, midwives, home visitors, and hospital beds than other nations in the survey (Exhibit 2). The proportion of Gross National Product (GNP) spent on health care is less in nations with monopolistic systems (av. 5.88) than in the others (av. 6.64). The four countries in the survey with purely pluralistic systems of health care (Belgium, Federal Republic of Germany, Luxembourg, and Switzerland) spend on average the greatest share of GNP on health care (av. 7.6) (Exhibit 2).

EXHIBIT 1
Nations Participating in WHO's 1982 Survey of Perinatal Care in Europe

	Health Care System		
	Monopolistic	*Pluralistic*	*Intermediate*
Austria			•
Belgium		•	
Bulgaria	•		
Czechoslovakia	•		
Denmark			•
Finland	•		
France			•
German Democratic Republic	•		
Federal Republic of Germany		•	
Greece			•
Hungary	•		
Ireland			•
Italy			•
Luxembourg		•	
Netherlands			•
Norway			•
Poland	•		
Rumania	•		
Sweden	•		
Switzerland		•	
Turkey			•
United Kingdom			•
Yugoslavia	•		

World Health Organization, Regional Office for Europe, 1985. Spain was not included in the 1982 survey, but would be regarded as an intermediate care system (Alvarez, 1987).

EXHIBIT 2

Comparison of National Groups in the EURO Survey According to System of Health Care (Data not available for every country in each category)

	Monopolistic Systems	*Pluralistic Systems*	*Intermediate Systems*
Mean No. per Inhabitants per*			
Physician	473	511	712
Midwife	3,234	8,835	5,728
Home visitor	725	3,427	2,718
Pediatric bed	2,009	2,364	12,428
Obs/gyn bed	1,403	4,697	12,963
Share of GNP spent on health care+	5.88	7.60	6.29
Infant mortality rate (per 1000 live births)+	16.9	15.34	
Maternal mortality rate (per 100,000 live births)+	29.46	7.54	
Standardized mortality rate due to cancer of cervix+	5.8	3.12	
More than 90% of population with access to safe water+	5/9	14/14	
More than 90% of population with access to sanitary facilities+	0/10	8/14	
Average per capita income**	$6,596	$9,791	

*as reported by World Health Organization Regional Office for Europe. *Having a Baby in Europe*. Copenhagen, 1985.
+Compiled from World Health Organization *7th Annual Report on The World Health Situation*, Geneva, 1986.
**UNICEF. 1986. *State of The World's Children*, 1984. Oxford.

The countries with monopolistic systems of health care enjoy less favorable health status than the other reporting groups: infant mortality rates, maternal mortality rates, and mortality rates from carcinoma of the cervix are all higher (Exhibit 2). Note should be made that these groups of countries differ markedly in many respects other than their health service systems. The countries with monopolistic systems are less affluent than the others. Average annual per capita gross national product is lower and a smaller proportion of the populations have access to safe water and to sanitary facilities (Exhibit 2).

EXHIBIT 3

European Countries With the Most Recently Reported (Usually 1982) Infant Mortality Rates (IMR) Lower Than in the U.S. (10.6 in 1984)

	IMR
*Belgium	10.10
*Denmark	7.71
Finland	6.10
*France	9.40
German Democratic Republic	10.00
*Federal Republic of Germany	10.20
Iceland	7.10
*Ireland	10.10
Luxembourg	10.10
*Netherlands	8.40
*Norway	7.90
*Spain	9.60
Sweden	7.00
*Switzerland	7.60
*United Kingdom	10.00

*Included for analysis in this report
World Health Organization, 1986, *7th Annual Report on the World Health Situation*, Geneva.

A SELECTIVE ANALYSIS

According to recently available data 15 European nations have infant mortality rates more favorable than the U.S. They are listed in Exhibit 3.

From the list of nations with the best infant mortality rates two groups were excluded from further analysis in the expectation that their experience would hold little relevance to anticipated U.S. policies. Exclusions were made for countries with populations less than one million, and for those with monopolistic systems of health care. Ten countries remained for study: Belgium, Denmark, France, Federal Republic of Germany, Ireland, Netherlands, Norway, Spain, Switzerland, and the United Kingdom (Exhibit 3).

The group of study countries is noteworthy in several respects. Both Finland and Sweden, characterized as having monopolistic systems of health care, are excluded even though they frequently are cited in international comparisons of maternal and child health services (Wallace, 1975; National Center for Health Statistics, 1985b). The record of maternity care is outstanding in both countries, but few alternatives for care are available to pregnant women. In both countries nearly all prenatal care is rendered in public clinics, and women must deliver in a hospital that is determined by place of residence. Those are not circumstances

likely to be adopted in the U.S.

Designation of the United Kingdom, noted since 1948 for its National Health Service as a form of health care intermediate between pluralism and government operated monopoly, deserves comment. Important considerations for the committee's decision include retaining for pregnant women the choice about place of delivery, the persistence of a small private sector of physician providers, and the growing importance of private health insurance coverage. In addition the physician providers in the U.K., although they contract with the National Health Service, are not government employees.

Inclusion of Spain and Ireland in the study group arouses interest because they are less affluent than other nations in the study. Both of them have undertaken important health service reforms in recent years and have achieved impressive new records for infant survival (see individual country synopses).

PERINATAL CARE

Studies concerning the benefits that derive from maternity care are confounded by lack of precise definition of the content of that care. If the field of interest is narrowed to the number and content of visits to medical care providers (physician, midwife, or clinic) the benefits may be difficult to demonstrate, especially for low risk women (Greenberg, 1983). The following analysis takes a different approach, attempting to summarize the full range of social and medical measures that are provided in conjunction with childbearing. Many of the supportive measures are triggered by the first prenatal visit to a medical provider's office, and they invoke a complex array of programs far beyond traditional medical care: income supplementation, counseling and education, work leave and protection, home visiting and preferences in transportation and housing. Research empiricists will be disappointed that careful studies are not available to measure the relative impact of these various interventions. This lack has not forestalled in most countries the energetic provision of supports and services that may rely for their justification on value judgments that are not firmly rooted in measurement, but which have accumulated long records of favorable experience.

Science, compassion and experience come together in support of the perspective that neglect of pregnant women and newborn infants is devastating to their health and ultimately to society's social and economic vigor (Institute of Medicine, 1985). Review of circumstances in the ten countries included in this study confirms that the combinations and relative emphases of supportive services are exceedingly diverse, but they share a strong common thread. Pregnant women are not neglected; society recognizes a responsibility to provide care. The ways by which neglect can be averted, even for hard to reach population subgroups, are exceedingly diverse, but not obscure.

Patterns of perinatal care vary greatly from one country to another except in one important respect. No pregnant woman in Europe needs to ask how or where she will receive care or who will pay for it. In all of the countries studied various options for care are available, but that variation does not obscure access to well-defined provider systems that are universally available, well known, and with no self-pay barriers. In all countries the entire sequence of perinatal care is either free without means testing or involves negligible charges that are readily waived in the event of need.

Several circumstances about these ten countries deserve consideration, leading to comparisons with the U.S. for purposes of considering strategies that may appropriately be considered for domestic reforms (Exhibit 4).

DEMOGRAPHICS

Comparison of human services between the U.S. and European countries are sometimes discounted on the basis that heterogeneity of the U.S. population complicates delivery systems more than in Europe. That reasoning is weakened by a regard for migrations since World War II into Western Europe from the Middle East, North Africa and from various former colonies. Foreign-born persons make up 10.6 percent of the population of France, 16.7 percent of Switzerland, and 8.8 percent of the United Kingdom (United Nations, 1983). Proportions are much higher for some cities. In Amsterdam 18.2 percent of the population is foreign born (Doornbos and Nordbeck, 1985) and the proportion for Brussels was 23.9 percent in 1981 (Buekens, 1987). The large contribution of non-autochthonous populations to the problems of childbearing is most strikingly revealed by data on

EXHIBIT 4

Characteristics of the Study Countries

POPULATION*—1982-84 (in thousands)

Belgium	9,900
Denmark	5,110
France	54,219
FRG	61,049
Ireland	3,500
Netherlands	14,400
Norway	4,134
Spain	38,100
Switzerland	6,437
United Kingdom	56,372
U.S.A.	229,800

*World Health Organization, *7th Report on World Health Situation* 1986. Geneva. Data are for 1983.

INFANT MORTALITY RATE—1982

Belgium	10.10
Denmark	7.71
France	9.40
FRG	10.20
Ireland	10.10
Netherlands	8.40
Norway	7.90
Spain	9.60
Switzerland	7.60
United Kingdom	10.00
U.S.A. (1984)	10.60

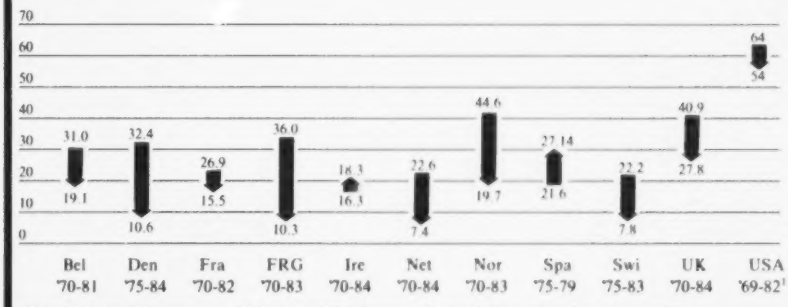
LOW BIRTH WEIGHT RATE+—1982-83

Belgium	5
Denmark	6°
France	5
FRG	5
Ireland	4
Netherlands	4
Norway	4
Spain	NA
Switzerland	5
United Kingdom	7
U.S.A.	7

+UNICEF, *The State of the World's Children*, 1987. Oxford Press.

°According to other sources the rate of LBW for Denmark is three percent (World Health Organization, *7th Report on World Health Situation*, 1986, Geneva).

RATE TEEN CHILDBEARING**



**Live births per 1000 women age 15-19, from WHO, European Regional Office, Copenhagen, national files.
†Demographic Yearbook, United Nations, 1983 and 1973.

LIFE EXPECTANCY AT BIRTH*—1982

Belgium	73.5
Denmark	74.7
France	74.9
FRG	73.9
Ireland	72.2
Netherlands	76.2
Norway	76.1
Spain	73.6
Switzerland	76.2
United Kingdom	74.2
USA	75.0

*World Health Organization, *7th Report on World Health Situation*, 1986, Geneva. Data are for 1983.

GROSS NATIONAL PRODUCT PER CAPITA*—1983

Belgium	11,920
Denmark	13,120
France	12,190
FRG	13,450
Ireland	5,230
Netherlands	11,790
Norway	14,060
Spain	5,640
Switzerland	17,430
United Kingdom	9,110
U.S.A.	12,820

*World Health Organization, *7th Report on World Health Situation*, 1986, Geneva. Data are for 1983.

% GROSS NATIONAL PRODUCT FOR HEALTH CARE*

Belgium	9.10
Denmark	5.50
France	8.00
FRG	9.30
Ireland	7.40
Netherlands	8.80
Norway	7.10
Spain	4.30
Switzerland	7.00
United Kingdom	6.10
U.S.A.	10.70

*World Health Organization, *7th Report on World Health Situation*, 1986, Geneva. Data are for 1983.

% SHARE OF HOUSEHOLD INCOME++

	Lowest 20%	*Highest 20%*
Belgium	7.9	36.0
Denmark	5.4	38.6
France (1975)	5.3	45.8
FRG	7.9	39.5
Ireland (1973)	7.2	39.4
Netherlands	8.3	36.2
Norway	6.0	38.2
Spain	6.9	40.0
Switzerland	6.6	38.0
United Kingdom	7.0	39.7
U.S.A.	5.3	39.9

++World Bank, *World Development Report*, 1986. Oxford. The reported years vary between 1979 and 1982 except for France and Ireland which are for 1975 and 1973 respectively.

the country of origin for children under five years of age in Amsterdam in 1981; 44.5 percent were born to non-autochthonous families, most commonly Surinamese or Morrocan (Doornbos and Nordbeck, 1985).

Many reports (Doornbos and Nordbeck, 1985; Kaminski et al., forthcoming; and Blondel, 1986) confirm that pregnancy-related utilization of

services and pregnancy outcomes for immigrant women are less favorable than for autochthonous populations, but the gaps are neither great nor consistent. In Amsterdam 70 percent of Dutch women and 50 percent of immigrant women came for prenatal care within the first 16 weeks of pregnancy; subsequently the immigrant women made more frequent visits. In Munich women of non-Germanic origin (about 20 percent of deliveries) used public health services at the same rate as German women (Doornbos and Nordbeck, 1985). In another study the quality of prenatal care for each nationality subgroup was similar for all patients delivered at a large London hospital (cited by Buekens, 1986b, forthcoming). Pregnancy outcomes were less favorable for immigrant women both in Amsterdam and in Munich. Not all studies demonstrate this difference. In Sweden (not included among the study countries) non-Nordic immigrant families were shown to use health services extensively and to have pregnancy outcomes that were comparable if not more favorable than for indigenous Swedes (Smedby and Ericson, 1979). Doornbos and Nordbeck (1985) cite a study in West Germany demonstrating that perinatal mortality rates among Turkish immigrants were similar to the German population of the same socioeconomic status.

These data are presented without the intent of establishing that circumstances for immigrant families in Europe are in every way parallel to those for indigenous minority families in the U.S. Almost certainly a different set of problems pertains but both involve overcoming barriers associated with sociocultural differences. In Europe the involvement of high risk immigrant women into systems of health care has not happened automatically. Special measures have been taken, such as the Dutch system that provides instantaneous on-site telephonic translations when health care providers and their patients encounter a language barrier.

Population density is high in most of the countries, but the exceptions are important. Norway's population is widely scattered among many isolated communities. The average number of prenatal visits varies only between 10 and 14 in all parts of the country. Pregnant women who live in remote areas are reimbursed for travel and living expenses in order to relocate for ten days to areas near hospitals when delivery is expected. At the other extreme, Barcelona, known for the poverty and congestion of extensive barrios, has an infant mortality rate of 8 (the rate in the District of Columbia is 21). Among the study countries the urbanized proportion of the population ranges from a low of 57 percent for Ireland to a high of 96 percent for Belgium; four countries in the study (France, Norway, Ireland, and Switzerland) have a less urbanized population than the U.S. (UNICEF, 1987). These findings suggest that neither metropolitan congestion nor rural isolation need hinder the adequate provision of supports and services that associate with favorable pregnancy outcomes.

TEENAGE CHILDBEARING

The most important demographic difference between the U.S. and the ten European nations is the age-specific fertility rate. Rates for teenage pregnancy, abortion and childbearing are substantially lower in Europe than in the U.S. (Jones et al., 1985). The rate of childbearing among 15- to 19-year old women is strikingly higher in the U.S. than in the European countries (Exhibit 4). The difference holds for both black and white U.S. populations and would be even greater if the high abortion rate in the U.S. did not interrupt nearly half the teenage pregnancies. This entire issue and its implications for infant survival have been carefully reviewed by the Alan Guttmacher Institute (Jones et al., 1985). Their findings suggest that age of onset of sexual activity does not vary greatly among these countries, but the U.S. differs with more limited access to contraception and less participation by children in organized programs of sex education.

A dramatic decline in European rates of teenage childbearing took place during the 1970s when the U.S. rate remained high (Exhibit 4). The low level of teenage childbearing in Europe occured in the context of extensively expanded medical and social benefits for pregnant women including income supplements to help with the expense of child rearing. These expanded benefits did not induce teenagers to increase their fertility in order to take advantage of financial benefits. Most of the basic maternity benefits were enacted in Europe in the years immediately after World War II. Extensive updating and expansion of benefits took place in

the late 1960s and 1970s (Netherlands, 1962; Denmark, 1969; Belgium, 1971; Federal Republic of Germany, 1974; Spain, 1974; United Kingdom, 1975; France, 1981; Ireland, 1982; as reported in WHO, 1986). These are precisely the years when teenage childbearing decreased most dramatically in Europe, lending no support to arguments that maternity-related social benefits promote fertility among teenagers.

All countries in the study except for the U.K. have lower rates of low birthweight than the U.S. (Exhibit 4). When the U.S. rates are disaggregated according to race the U.S. rates for whites (5.7) is still substantially higher than the best rates among the study countries (National Center for Health Statistics, 1985a; Exhibit 4). These differences cannot be explained entirely on the basis of different rates of teenage childbearing. When corrections are made for other known variables the contribution of maternal age to low birthweight is small (Institute of Medicine, 1985).

HOUSEHOLD INCOME

The per capita gross national product (GNP) in the U.S. and in Western Europe is exceedingly favorable, but it does not independently account for low infant mortality rates. A three-fold difference in per capita GNP separates the European countries with the lowest values from those with the highest (Ireland and Spain with values of $5,230 and $5,640 respectively, and Switzerland with $17,430). The U.S. rate is higher than for six nations with better records of infant survival (Exhibit 4).

The spread of household income is of interest. The lowest income quintile in the U.S. commands a lesser share of total national household income than for any nation in the study, except possibly in France for which recent data are not available (Exhibit 4). The spread of proportional shares of income between the highest and lowest quintiles provides further interesting information (Exhibit 5). The gap between rich and poor is greater in the U.S. than in any country except France. Income redistributions effected by the Omnibus Budget Reconciliation Act of 1981 have greatly increased the gap between highest and lowest quintiles in the U.S. (Committee on Ways and Means, 1984). The tax reform bill enacted by Congress in 1986 will restore some income to the lowest income quintile (Children's Defense Fund, 1986).

EXHIBIT 5
Household Income

	Difference Between Highest and Lowest Quintiles in Proportional Share of Total Household Income (1979-1982)
Belgium	26.1
Netherlands	27.9
Switzerland	31.4
FRG	31.6
Ireland (1973)	32.2
Norway	32.2
U.K.	32.7
Spain	33.1
Denmark	33.2
U.S.A.	34.6
France (1975)	40.3

Calculated from Exhibit 4

Redistribution of household income to reduce pauperism might bring many benefits including a reduction in infant mortality rates. But the record clearly indicates that average household wealth that is much less than in the U.S., and income distributions that are not greatly different (France, Denmark, Spain) are compatible with highly favorable rates of infant survival. Without in any way minimizing the urgency for reducing poverty rates, especially in households with children, a compelling case can be made that selective and direct approaches for improving pregnancy outcomes are both feasible and desirable even within the present income structure of the U.S.. The recent records in Ireland and Spain are especially compelling in this regard (see national synopses).

NATIONAL FINANCES

No country in the study spends as high a proportion of gross national product on health care as the U.S. (Exhibit 4). Countries that emphasize insurance systems to reimburse private physician providers on a fee-for-service basis (Belgium, France, Federal Republic of Germany and Switzerland) tend to spend more (average 8.3 percent of GNP) than countries that compensate providers at a negotiated fixed per capita rate (Denmark, U.K., Norway, Netherlands; average 6.85 percent of GNP) or those which make extensive use of public clinics (Spain, Ireland and in some

EXHIBIT 6
Proportional Distribution of Gross Domestic Product

	Service Sector		*Agriculture Sector*	*Industrial Sector*	*Manufacturing Sector*
	1965	*1984*	*1984*	*1984*	*1984*
Belgium	53	64	3	34	24
Denmark	60	70	5	25	17
Federal Republic of Germany	—	52	2	46	36
France	—	62	4	34	25
Ireland	—	64	11	25	14
Netherlands	—	64	4	32	24
Norway	59	54	4	43	14
Spain*	49	60 (1982)	6 (1982)	34 (1982)	32 (1982)
Switzerland	—	—	—	—	—
United Kingdom	56	62	2	36	22
United States	59	66	2	32	21

From: World Bank, *World Development Report*, 1986, Oxford University Press.
*1982 data provided by Alvarez, 1987.

areas the U.K. and Norway; average 6.25 percent of GNP).

Predominant health care provider systems and their means of financing vary greatly among the European countries, but these countries have been consistent in pursuing vigorous policies to reduce hospitalization other than for childbearing (WHO, 1986). They have also emphasized organized community services with decentralized administration under uniform national standards for preventive measures. Increasing responsibility for health services has been placed on local governmental jurisdictions as the role of central government has been strengthened for standard setting, monitoring and overall financing. Even in Switzerland, probably the most privatized system of health care among the ten study countries, national perinatal service standards are defined and their implementation is subsidized by government grants to the insurance companies.

Expansion of services and supports related to childbearing has not been a deterrent in most countries to efforts for holding firm or even reducing the proportion of gross national product committed to health care (WHO, 1986). Those efforts have focused instead on reducing non-maternity hospitalization rates. Denmark and Ireland both report decreases in non-capital public expenditures for health care; Spain and the Netherlands report no recent increases (WHO, 1986). These observations justify the conclusion that national policies that assure participation in free maternity services are compatible with low national cost of health care and may actually contribute to economies (Institute of Medicine, 1985). Abel-Smith (1985) examined rates of growth in percentage of national resources devoted to health care in Western Europe and the U.S. between 1966 and 1982. He concluded that Western Europe, even with generous universal entitlements to health care, had done a better job than the U.S. in containing costs.

Nations with economies that feature extensive social supports and public health services are sometimes characterized as welfare states with a shift of their economic emphasis from manufacturing and industrial predominance to a service orientation. Comparisons are interesting in this regard. The service sector of the economy is proportionally greater in the U.S. than for most of the European nations in the study, and that sector has tended to grow at least as much in the U.S. as in the welfare states (Exhibit 6). The large service economy in the U.S. is clearly not focused on the needs of childbearing.

The European nations devote much less of their central government expenditures to defense than the U.S., and devote more to education, housing and social security (Exhibit 7). Woolhandler and Himmelstein (1985) report an international analysis that associates arms spending with infant mortality. The justifications and problems associated with defense spending exceed the scope of this paper, except to point out that whenever military crises require the mobilization of manpower, concerns are expressed over the high rate of health problems

EXHIBIT 7
1983 Proportion of Total Central Government Expenditures

	Defense	*Education*	*Health*	*Housing, Amenities and Social Security*
Belgium	5.2	13.9	1.7	42.8
Denmark				
Federal Republic of Germany	9.3	0.8	18.6	50.3
France	7.3	8.2	14.6	47.6
Ireland	—	—	—	—
Netherlands	5.3	11.2	11.3	41.2
Norway	8.6	8.8	10.6	36.2
Spain	4.4	6.0	0.6	64.2
Switzerland	10.4	3.1	13.4	49.7
United Kingdom	—	—	—	—
United States	23.7	1.9	10.7	36.3

From: World Bank, *World Development Report*, 1986, Oxford University Press.

among young adults. A good time to begin addressing that situation is during their gestation and birth.

The proportion of central governments' expenditures for health care covers a wide range, influenced by the different levels of participation by local government or insurance financing. The U.S. central government expenditures for health do not differ greatly from many of the European countries (Exhibit 7).

The European governments derive their income differently from the U.S., relying much more on taxation against domestic goods and services and less on taxation against income (Exhibit 8).

HEALTH CARE FINANCING AND DELIVERY

Financing systems for health care are strikingly different among the countries, and bear no consistent relationship to differences in prevailing health care provider systems. Insurance and social security schemes predominate, premium payments being made both by employers and by workers as wage deductions. Insurance may be government run or controlled (Netherlands, Spain, Belgium), predominantly private (Switzerland) or a combination of public and private systems (Federal Republic of Germany, France). In four countries, all of which rely predominantly on office-based practitioners for primary care, financing comes entirely or in large part from general tax revenues (Denmark, U.K., Ireland, Norway) (Exhibit 8A).

This diversity should not obscure a theme

EXHIBIT 8
Proportion of Total Central Government Revenue, 1983

	Taxes on Income Profit or Capital Gains	*Social Security Contribution*	*Taxes on Domestic Goods and Services*
Belgium	38.4	31.2	24.4
Denmark	33.7	4.9	44.6
Federal Republic of Germany	17.0	55.1	22.0
France	17.7	44.4	29.5
Ireland	32.2	13.8	26.6
Netherlands	24.3	41.4	19.8
Norway	25.1	23.9	38.7
Spain	21.7	46.2	15.4
Switzerland	14.2	49.3	49.3
United Kingdom	38.7	17.7	28.6
United States	49.9	31.3	5.4

From: World Bank, *World Development Report*, 1986, Oxford University Press.

EXHIBIT 8A
Health Care Financing

Private Insurance—Switzerland

Government Insurance—Belgium
Netherlands
Spain

Private/Government Combination—Federal Republic of Germany
France

General Tax Revenues—Denmark
Ireland
Norway
United Kingdom

Source: WHO, 1986

common to all countries. No matter what the financing system, even when private intermediaries participate extensively, central government has defined the services that are to be provided and in the instance of maternity care has in every country removed all barriers to those services.

Using the taxonomy for health care financing displayed in Exhibit 8A, the U.S. would be classified with the group (Federal Republic of Germany, France) relying on a combination of private insurance and government financing (Medicare, Medicaid, and Title V of the Social Security Act specifically for maternal and child health services). Health care financing in the U.S. differs from the other countries in two important respects. The first is that uniform national standards for perinatal care, as for other health services, have not been developed, and hence insurance companies and providers are not monitored to maintain consistent participation in quality care. The second major difference is the U.S. failure to achieve universal coverage of the population in one or another scheme for health care financing.

Some financing procedures are of special interest for policy considerations in the U.S. Among them are the subsidies paid by central government to insurance companies to help underwrite the costs of meeting government standards associated with childbearing (Switzerland). Of additional interest is the practice of having insurance or social security funds make contributions to salaries that are paid during maternity leaves, thus relieving employers of an economic burden that might otherwise lead to employment discrimination against women of childbearing age.

Maternity-Related Services

PROFESSIONAL PROVIDERS

The diversity of arrangements for health care to pregnant women is impressive from one country to the next, and within each nation in the study. Most countries have well-established traditions of general physician practice. In four countries (U.K., Denmark, Norway, Netherlands) the general practitioner is the gatekeeper to other services. In the U.K. and Denmark each person is enrolled with a specific practitioner who cannot be changed but once a year. In other countries a person has free choice of seeking services from any practitioner, either generalist or specialist (Belgium, Switzerland, France, Ireland, West Germany and Spain). The tradition is strong for specialists, such as obstetricians, to be hospital based and to render their consultations in hospital out-patient departments.

Midwives are extensively involved in European maternity care. Their work is ordinarily confined to hospitals and to rendering prenatal care in multidisciplinary clinics, except in the Netherlands where midwives are independent office-based practitioners. In Denmark midwives are government employees and work out of public offices or clinics participating in a schedule of routine prenatal care that includes visits to a general practitioner and to an obstetrician. A 1984 government report in Norway recommends 12 prenatal visits for uncomplicated pregnancies, half to a midwife and the others to a general practitioner. In most countries midwives frequently attend uncomplicated deliveries for women who have received routine prenatal care from office-based general practitioners. Midwifery in Europe is a health profession requiring extensive training. Trainees may be nurses but not always.

Exhibit 9 displays the alternatives available for the principle professional providers for prenatal care, and for attendance of delivery. Trends show a decline of the general practitioner's role in several countries (Ireland, France, Netherlands) in favor of an expanded role for midwives and obstetricians.

PUBLIC CLINICS

Public clinics are sometimes regarded as an available alternative to office-based physician practice (Exhibit 10). In Norway, for example, each municipality is required to maintain at least one public multidisciplinary health center even though care by office-based medical practitioners may be readily available. In some other countries multidisciplinary public clinics have been developed in selected locales to enhance services for hard-to-reach populations (Belgium, United Kingdom). Several countries have either phased out public clinics or have elected not to develop them in the belief that access to physicians' offices is both assured and universally utilized (Denmark, Netherlands, Federal Republic of Germany, Switzerland and France). Only two countries in the study (Ireland and Spain) have pursued a recent policy that dramatically extends public clinics and relies on them as a multidisciplinary focus for primary medical care, including perinatal care, and

EXHIBIT 9
Professional Provider of Maternity Care

	PRENATAL			*DELIVERY***		
	Obstetrician	*Midwife*	*General Practitioner*	*Obstetrician*	*Midwife*	*General Practitioner*
Belgium	+	rare	+	+	+	+
Denmark*	2°	5°	3°	+	usual	+
France	+	+ (clinics)	+	41%	39%	20%
Federal Republic of Germany	+	rare	+	+	+	+
Netherlands	0#	+ (office practice)	+	43%	41%	16%
Norway	0#	11° (clinics)	+	+	usual	+
Switzerland	+	rare	+	75%	25%	0
United Kingdom	+	+(clinics)	+	+	usual	0
Ireland	+	+(clinics)	+	+	usual	0
Spain	+	0	+	+	+	0

°Usual number of visits to each provider by a woman with an uncomplicated pregnancy.
+A frequently utilized provider.
*The usual pattern for a normal pregnancy schedules care by several different providers, each for the number of visits indicated.
**Percentages refer to attendance at *all* deliveries; otherwise the notations refer to uncomplicated deliveries.
#Only for specific medical indications, about 30% in the Netherlands.
Adapted from Blondel, et al., 1985; supplemented by EURO survey data.

EXHIBIT 10
Public Health Centers That Provide Prenatal Care

Not available except in the out-patient departments of hospitals:

Federal Republic of Germany
Netherlands
Switzerland

An option for prenatal care, at least in some areas:

United Kingdom
Ireland
Spain
France
Belgium
Norway
Denmark (for visits to midwife)

Source: EURO Survey

EXHIBIT 11
Number of Antenatal Visits

	Legal or Rec. No.	*Average Actual Number*
Belgium (French Speaking Sector)	7	9.4*
Denmark	10	8
France	7	5.9
Netherlands	12	12-14
Norway	12-14	39% of women > 10
Switzerland	3-4	5
United Kingdom	12-13	10-12 (Scot)
Federal Republic of Germany	10	ND
Ireland	6	10 urban 5 rural
Spain**	10	6

ND—No Data
Adapted from Blondel, forthcoming; EURO Survey
*From Vandenbussche, Wollast and Buekens, *Brit. J. Obstet. & Gynecol.* 1985, 22:1297.
**Alvarez, 1987

for a number of social support services. Both countries were faced with the need to improve health conditions without a major increase in expenditures. In both countries these goals have been impressively realized.

NUMBER OF ANTENATAL VISITS

The officially required or recommended number of antenatal visits for the uncomplicated pregnancy varies enormously (4 to 12). The average number of visits actually made closely approximates or exceeds the recommendations (Exhibit 11).

EXHIBIT 12
Home Visiting (Data not available for Spain)**

A. PRENATAL

Always at least once:

Netherlands
Belgium (unevenly implemented)
*Denmark (unevenly implemented)

Only for complicated pregnancies or to check on clinic non-attenders:

Norway
France
*Ireland
*United Kingdom
Belgium
Switzerland
Federal Republic of Germany (not an extensive program)

*Well-developed program for non-attenders

B. POSTNATAL HOME VISITS

Always at least once:

Denmark
Ireland
Netherlands (daily visits by a maternity care worker for up to eight hours each day through the 10th postpartum day)
Norway
Switzerland
United Kingdom (daily visits by a midwife for 10 days)
Belgium

Only for special indications:

Federal Republic of Germany
France

Source: EURO Survey
**Spain is currently implementing a program of pre- and postnatal home visiting. Services are not yet widely available (Alvarez, 1987).

HOME VISITING

Home visiting is a feature of nearly every country's maternity care, most consistently practiced after delivery than as a part of prenatal care (Exhibit 12). Home visitors are sometimes midwives but they are more often nurses with special training for home visiting. No country makes use of health aides or indigenous workers as home visitors, except possibly the Netherlands where an extensive postnatal homemaking service supplements routine postnatal visiting by the midwife or general practitioner who rendered prenatal care.

Postnatal home visiting in the Netherlands is a central theme of maternity care. Every woman is visited at home either by the midwife or general practitioner. In addition a specially trained maternity home helper stays at home with the mother and infant for up to eight hours a day until the 10th post-partum day! The visitor helps with infant care, shopping, housekeeping, meal preparation and care of older siblings. In 1986 each newborn and mother received an average of 64 hours of postnatal home visiting for a token fee of 40 guilders—about 15 percent of the cost of one day's home help (Verbrugge, 1987).

In all countries postnatal home visiting is seen as a means for counseling about infant care, for follow-up on the mother's health, for advice on family planning, to initiate or follow-up neonatal screening procedures, and to arrange for additional appointments for the infant and mother.

INCENTIVES TO PARTICIPATE IN PRENATAL CARE

In two countries (France and Federal Republic of Germany) financial benefits, payable at the time of delivery, are reported to be withheld if the woman did not participate in a specified number of prenatal visits. In West Germany this practice has been discontinued and the benefits are now rendered without reference to prenatal visitation; only France continues the practice of offering a financial bonus for women who have made at least three prenatal visits. Prenatal attendance in France, particularly among Algerian immigrant women, improved markedly during the 1970s. Between 1972 and 1981 the proportion of pregnant women with fewer than four prenatal visits fell from 15.3 percent to 3.9 percent (Maxwell, 1984). The influence of financial incentives on this trend is problematic. Buekens has examined publications that attempt to evaluate the effectiveness of financial incentives and found the evidence inconclusive (Buekens, 1986b forthcoming).

The French system places incentives in an explicit and overt context with some punitive implications. Another way of considering incentives is to regard the full range of benefits and supports, not all of them financial, associated with childbearing as incentives to enroll in prenatal care. Benefits and services include: transportation privileges; early booking for delivery according to the woman's preferences; paid leaves from employment; birthing bonuses; family allowances; and home visitors who counsel, instruct and even help with the shopping and housework. All of these are powerful incentives to register the pregnancy and impending delivery with the appropriate agencies, procedures

EXHIBIT 13
Home Deliveries as a Proportion of All Deliveries (1979-82 data)

Belgium (1984)	0.4%
Denmark	0.5%
France	0.5%
Federal Republic of Germany	1.0%
Netherlands	35.4%
Spain*	0.5%
United Kingdom	1.4%

Precise data are not available for other countries beyond notations that home deliveries are rare or uncommon.

From: Houd and Oakley, 1986.
*Alvarez, 1987

ordinarily accomplished at the first prenatal visit.

In all European countries in the study the incentives for participating in prenatal care are strong, and the barriers are nearly non-existent. Rather than ask why pregnant women participate so early and so consistently, the question might instead be posed as "Why wouldn't they?"

HOME DELIVERIES

The proportion of home deliveries has declined everywhere and remains high only in the Netherlands, where it represents officially supported policy (Exhibit 13).

The high rate of home deliveries in the Netherlands stands apart from all other nations. The Dutch insurance system will not compensate for an obstetrician's services or for a hospital delivery in the absence of a specific medical indication from an authorized list. New perinatal guidelines in Denmark encourage home deliveries which are increasing in some parts of the country.

HOSPITAL DELIVERIES

Precise data were not available on the duration of hospital stay for childbearing, but evidence is suggestive (e.g. see descriptions of Denmark, Ireland, Netherlands) that it is longer than in the U.S. and that when the stay is less than five days the postnatal home visits are increased in frequency and duration.

Caesarean section rates are consistently lower than in the U.S. (Exhibit 14) where it is 23 percent (Placek, 1986). Trends are upwards in all countries.

EXHIBIT 14
Caesarean Section Rates For 1983, Unless Otherwise Indicated**

Belgium	8.1%
Denmark	12.8%
Federal Republic of Germany (Bavaria)	13.2%
France (1981)	10.9%
Ireland	N.D.
Netherlands (1981)	4.9%
Norway	9.4%
Spain (1981)*	6.5%
Switzerland	N.D.
United Kingdom (Wales and England only)	10.1%

N.D. — No Data
**Number of Caesarean sections per 100 hospital deliveries, except in the Netherlands, where the rate was calculated based on both hospital and home deliveries.
Source: Notzen, Placek and Taffel, 1987.
*Alvarez, 1987

CONTINUITY OF CARE

Continuity of care in the sense that one provider attends the same patient throughout the prenatal, intrapartum and postnatal periods is not a prominent feature in any of the countries. Community practitioners, whether in private practice or working in community settings, do not ordinarily have access to hospital care. Communications among different providers become urgent because a pregnant woman may receive prenatal care in more than one setting (practitioner's ofice and specialist's clinic at the hospital), be delivered by yet another provider (hospital-based midwife), and be visited postnatally by someone else. These communications are often facilitated by having the woman carry her own record or part of it.

INFANT AND CHILD CARE

All countries in the study have neonatal intensive care units and regional or local transport systems to facilitate their timely use. In most countries routine infant care begins with an examination by a pediatrician in the hospital and continues with a home visit in the first two weeks of life by a specially trained nurse. Immunization schedules and well-baby checkups are well defined and faithfully implemented.

Public clinics tend to be more extensively

developed for supervision of infant and child health than for maternity care. Sometimes those clinics function in close association with state schools. Even countries that rely extensively on office-based physician care for adults have adopted systems that enroll all children in public clinics for routine medical care, monitoring and screening (Denmark, Netherlands, United Kingdom, Belgium). The influence of this system on education for reproductive health and for the appropriate utilization of health services deserves careful evaluation.

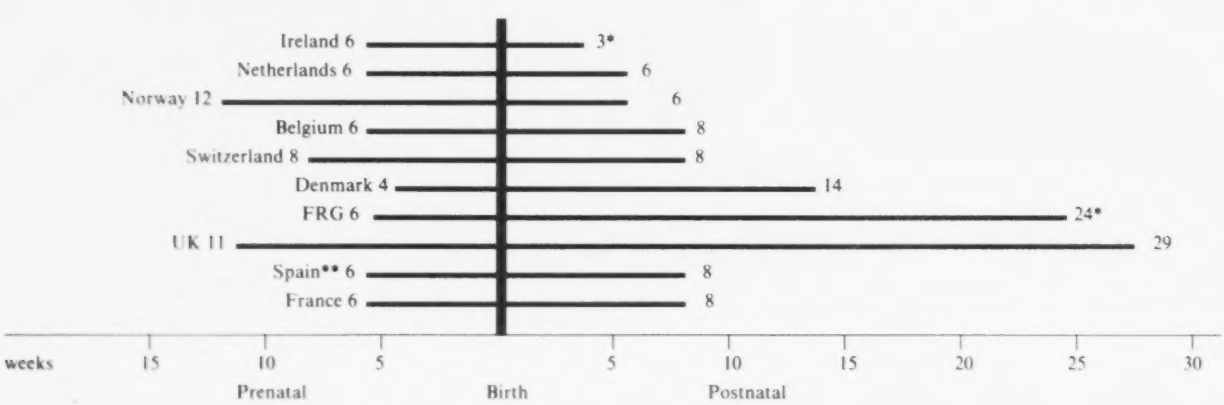
Maternity-Related Benefits

Every country in this study provides paid maternity leaves and sets protective limits on the working circumstances for pregnant women. Usual practice in most countries is to transfer women to non-strenuous jobs as soon as pregnancy is confirmed. Night work for pregnant women is forbidden in the Netherlands, Belgium, Switzerland and Federal Republic of Germany, although exceptions may be made in certain job categories or with the woman's consent. The law in several countries specifies that wages will continue during absences for prenatal visits or classes. The duration of usual maternity leave varies from a total of 9 weeks (Ireland) to 29 weeks (U.K.) (Exhibit 15).

In most countries the leave is obligatory. In Switzerland, Norway, Spain and Belgium the woman may elect to work until delivery and add the allowable prenatal leave for an extended postnatal leave. Similar postnatal extensions are permissable in the event of premature delivery. In Norway the father may take up to 12 weeks paid postnatal leave if he is the principal care giver; the Federal Republic of Germany allows either parent to take postnatal leave. In Spain women may redistribute the total allowable leave according to their own preferences; fathers are given three days paid leave at the time of delivery.

The amount of pay during maternity leave varies

EXHIBIT 15
Duration of Paid Maternity Leave (in weeks)



*Leave is extended for premature delivery
Source: Ierodiaconou, 1986 and EURO Survey
**Alvarez, 1987

EXHIBIT 16
Amount of Payment During Maternity Leave

100% of mother's salary (usually to a maximum level)	Belgium Federal Republic of Germany Norway Netherlands
90% of salary	Denmark France
75% of salary (not taxable)	Spain
A fixed payment regardless of salary	Ireland United Kingdom Switzerland

Source: EURO Survey and Ierodiaconou, 1986

EXHIBIT 17
Amount of Monthly Payment as a Children's Allowance

FOR TWO CHILDREN—

10-13% of average monthly wage
- Belgium
- Federal Republic of Germany
- France
- United Kingdom
- Netherlands

2-5% of average monthly wage
- Denmark
- Ireland
- Norway
- Switzerland

Source: Ierodiaconou, 1986

as indicated in Exhibit 16.

The source of funds for the payment of leaves varies considerably. It is more often from social security or health insurance funds than directly from the employer.

Leave can often be extended on an unpaid basis without loss of job or job-related benefits. Such extensions are possible in France and the Federal Republic of Germany for one to three years. In Belgium the period of leave is extended (unpaid) to the end of the fifth month for mothers who breast feed. All countries provide that in the event of illness additional paid sick leave may be given on medical authorization.

Payment during nursing breaks is ordinarily assured, ranging from two one-half hour intervals to two full hour periods each day (France, Norway).

Maternity grants or bonuses, without means testing, are paid at the time of childbearing in all countries except Denmark. The payments are intended to assist with the cost of supplies and equipment for the new baby. Switzerland pays an additional bonus for mothers who breast feed.

In all countries family allowances are paid for each child on a monthly basis, ordinarily until adulthood or until completion of education. The amount of the monthly allowance varies according to the number of children, but typical payments are shown in Exhibit 17.

Some special maternity-related considerations are noteworthy. Belgium allows pregnant women first class rail travel on a second class ticket. Special considerations are often given to single mothers (see Norway's synopsis for an outstanding example). Priorities for day care and for public housing are well established for working mothers or for large families.

Considerations for U.S. Policy

Patterns of perinatal care in the U.S. contrast sharply with those in Europe. Variations are great in different parts of the U.S. with respect to access to public clinics, enrollment in prepaid health maintenance organizations and traditions of job related health benefits. The high cost the U.S. pays for deficiences of care to pregnant women have been well documented (Institute of Medicine, 1985). High rates of low birthweight with the attendant mortality, morbidity, expense, and life-long disability are the parts of the problem that are most readily measured. Other legitimate concerns relate to the physical and emotional threat to young women who experience unnecessary jeopardy for what should be one of life's most rewarding experiences. People who cherish the concept of family stability might well ponder the sense of isolation and neglect that is experienced by young couples who are attempting to fulfill the family's most basic role: the bearing and nurture of children.

The first task for better reproductive health in the U.S. is to reduce unwanted childbearing by means of education and access to all appropriate services. That approach is well described in other sources (Jones, et al. 1985). Without in any way detracting emphasis from that urgent endeavor, another task must be faced: help for women and for couples who desire pregnancy and who want to bear children. Some of them face problems of infertility, but vastly greater numbers face formidable expense, lack of income and job protection, limited access to essential services, and the seeming indifference of a society to their aspirations except in the event of medical catastrophe.

The European experience suggests that these problems have readily available solutions, which require for their implementation some initiatives and inspiration at the highest levels of government. Quick fixes will not suffice. Specific strategies such as support for home visiting, better compensation for physician providers, and programs of high risk screening may each be a part of the solution, but these strategies will work only in the context of operative policies that assure universal participation of pregnant women in basic services and supports appropriate to their need.

Additional localized demonstration projects are scarcely required. Their numbers have been legion over the past three decades. The wisdom from successful demonstrations needs to be institutionalized for the benefit of all women of childbearing age.

The diversity of approaches in Europe is reassuring. Society can care for all pregnant women and newborn infants while at the same time protecting other interests. Exemplary and equitable systems of maternity care can be implemented in ways that preserve a woman's choice of provider, acknowledge the predominance of physician providers, preserve a private and voluntary orientation to health care, maintain a role for private insurance and encourage a governmentally decentralized mode of implementation. These are all interests that would require attention by a universal system of maternity care in the U.S. What must be challenged is the orientation that access to appropriate services is every woman's own responsibility. Society has a role. That role requires: (1) removal of all barriers to care, (2) assurance

that appropriate services are available and accessible, (3) and provision of supports and protections that are not otherwise available. These three endeavors require careful consideration.

BARRIERS TO CARE

The most formidable barrier is an economic one. People who bear children are young, and few young people can afford the present cost of childbearing. Private insurance, much of it job related, covers many people but not the unemployed, the self-employed, or the large number of part-time and temporary workers earning the lowest wages. The eligibility of poor people for public insurance under Medicaid is defined differently in each of the 50 states, at low levels which leave a large number of not-quite-so-poor families completely unprotected. The only reasonable solution is a national system that provides insurance coverage for the expenses of childbearing for all pregnant women. Those who are not covered by private insurance would need public protection without means testing in the fashion of Medicare. Few young people are sufficiently affluent to arouse concern that some people of means will receive financial aid unnecessarily. Identifying them and tracking their changing resources and eligibilities is a cumbersome and expensive procedure plagued by errors and inequities.

National standards would need to be established for the content and pricing of care in order to forestall inflationary abuses and neglect. Private insurance coverage would need to be regulated and monitored in ways that have proved feasible and acceptable in other countries.

Other significant barriers to care are largely ethnic, cultural and geographic. Not every woman feels comfortable or even welcome by the people in the middle class surroundings that characterize much of our medical provider system. Successful demonstration projects over the past 30 years have shown that hard-to-reach people will utilize health services that are consonant with their own way of life and convenient to their home or place of work.

PROVIDER SYSTEMS

Most women will continue to choose maternity care from physician providers, either in office-based practice or in professional groups. For some women that care may be rendered in the context of prepaid capitation schemes that cover all other medical expenses. Under a system of nationally insured maternity care, prepaid enrollment plans might be subsidized in order to meet uniform standards of care, and forestall an unfair financial burden for costs that are covered at public expense for unenrolled populations.

Experience suggests that these approaches will not necessarily work to reach all populations who experience the most extreme socioeconomic or cultural isolation. Greatest success in our own country and in some European countries for reaching those populations has been through multidisciplinary clinics working under public authority. The authority is most reasonably a part of the public health structure in state and local government, subsidized and monitored according to national standards. Those service systems have accumulated a record of greater stability than clinics under direct federal sponsorship. In many states the health departments already fulfill a function as guarantor of perinatal care to a commendable degree. Their shortcomings are largely attributable to inadequate financing.

Organized public maternity care programs need to be a part of every community where data on prenatal care and pregnancy outcomes suggest deficiencies or inequities. Techniques for that kind of monitoring are readily available (Miller, et al., 1986).

Some endeavors, such as home visiting, can be provided only through organized community programs. Communities should increasingly strive to link such public services to private and voluntary provider systems. Data are not widely available on home visiting to newborns in the U.S., but it is not an extensive practice. For example in one state (NC) with a high infant mortality rate the state adopted in 1985 an objective to visit 40 percent of infants born weighing less than 1500 grams. The objective was not met; only 20 percent of the extreme low birthweight babies were visited (NC Division of Health Services, 1986).

The role of midwives deserves special attention. They play a crucial role in the maternity care in Europe, especially as members of hospital-based maternity teams. Midwives are known to render services that are of high quality, economy and comprehensiveness—attributes that do not always characterize obstetric care. The history of

midwifery in the U.S. does not suggest an expanded role except in agency or hospital settings. That prospect may become more attractive to organized provider systems as they are required to comply with standards for comprehensive maternity care under economic limitations.

SUPPORTS AND PROTECTION

Insofar as U.S. law protects the health and safety of workers, they are largely regarded as male. During the decades when a large number of women entered the work force, practically no recognition was given to special protections on their behalf. Enough evidence has accumulated on the ill effects of strenuous and stressful work during pregnancy to justify some protective approaches.

Although many large employers provide maternity leaves for pregnant women, no national policy requires such a practice. In this respect the U.S. differs from 75 other nations including all of the developed and much of the developing world (Kamerman, Kahn, and Kingston 1983). Since 1978 women have been assured maternity leave only to the extent and for the duration that their physician declares them to be sick or disabled. Recent evidence suggests the need to re-examine maternity leave practices in the U.S. Montoya (1987) found that states with high participation of women in the work force experience high fetal mortality rates. Many variables may contribute to that association. The extent to which they might be mitigated by a more generous policy on maternity leave deserves careful consideration.

Some feminists have questioned a policy that would require maternity leave on the grounds that it would foster discrimination against the employment of women. Several approaches can quash concerns about discrimination. If pay during the leave were to derive from social security or health insurance funds, then employers would not suffer financially. If either the father or the mother were eligible for postnatal leave, then no basis for sex discrimination in employment would pertain. And if the payment during maternity leave were fixed at the minimum wage, then only the neediest would take advantage of it.

Our society does very little to provide infant day care for working parents. An argument can be made that the most effective and economic care giver for an infant is a parent. Our national maternity policy should not discriminate against parents who choose to stay home to play that role. In all industrial nations except the U.S., children's allowances have enabled women in families of marginal economic means to stay at home when they desired to, caring for their own children rather then entering the labor force. This policy has been shown not to increase fertility (Haanes-Olsen, 1972). In spite of the occasional case history to the contrary, women do not in appreciable numbers elect to bear children for the purpose of garnering more welfare support.

A policy of children's allowances is regarded in other countries as a contribution to the emancipation of women by placing in their hands some economic resources that are not directly controlled by male wage-earning heads of households. Children's allowances arguably increase the options available to women, rather than restrict them.

Conclusion

The European experience, and many special projects in our own country, have demonstrated that the wisdom and the means are available for the nation to improve vastly its performance for the care of pregnant women and newborns. No circumstance of demography, of personal or national finance, or of traditions that attach to providing and paying for health care preclude approaches that assure appropriate perinatal care for every pregnant woman. The strategies for providing that assurance are well described. Careful studies have shown that such an approach would in the long run save public expenditures rather than increase them (Institute of Medicine, 1985).

The issue is neither medical nor financial; it is political. Evidence for improved maternal health and infant survival points in the direction of expanded guarantees for social supports and basic health services. Men and women of good will may well differ on how those guarantees can best be given. Those differences should not be allowed to contribute to political inaction that fosters the continued neglect of pregnant women.

National Synopses

The usual source of information for the country synopses are the survey responses, WHO's *7th Annual Report on the World Health Situation*, and the internal national files at EURO. None of these sources provided data in exactly parallel and consistent fashion. The survey responses in particular varied greatly in their thoroughness and precision. As a consequence a uniform format is not followed for all the synopses. The narratives for each country strive to emphasize the characteristics that make a unique contribution to an understanding of comprehensive perinatal care.

BELGIUM

Health care in Belgium relies extensively on private and voluntary providers whose services are financed by an insurance system that is managed by the National Institute of Sickness and Disability Insurance in the Ministry of Public Health. Since 1963 health insurance has been compulsory and covers 99 percent of the population. Insurance pays for the entire or all but token costs of hospitalization, and 75 percent of out-patient charges.

National voluntary organizations with government financing provide special services for the aged, the handicapped, for infants and children, and for pregnant women. In 1982 some 960,000 persons sought care at private establishments compared to about 600,000 who attended public establishments, often government operated hospitals. Although health insurance, manpower preparation, and standards of health care are managed at the national level, the operational provision of health care, social services, and home care are separately managed by local authorities for French speaking, Dutch speaking, and German speaking communities. The influence of professional groups is strong.

During the 1970s a movement developed to establish Maisons Medicales, community centers that provide comprehensive ambulatory care. In these centers many services are performed by non-traditional providers, such as physicians assistants, under a system of global financing for the work of all providers including social workers, physicians, and medical assistants. The program was strenuously opposed by the physicians' union, causing growth of the program to be halted by a subsequent conservative government. Less than five percent of physicians work in Maisons Medicales.

Most prenatal care is rendered by privately practicing general practitioners or obstetricians. Both public and private hospitals in all parts of the country offer prenatal care in their out-patient departments. In the French speaking southern part of the country about one-fourth of all prenatal care is provided by the state maternal and child care organization (Oeuvre Nationale de l'Enfance, ONE) which is a voluntary agency totally financed from public funds. The ONE clinics, 130 in number, are located in the out-patient departments of community hospitals. Many high risk clients, especially the families of immigrant workers, obtain care in the ONE clinics. Nearly all deliveries occur

in hospitals or private nursing homes. In all parts of the country and for all socioeconomic classes the ONE is a major provider of health care for infants and children in well-baby clinics, crèches, and day care centers.

Home visiting is a featured part of maternity care. For registrants at the ONE clinics, a nurse is expected to visit the home twice in the prenatal period: the first time within two weeks of the first consultation, and the second time at about the 24th week of pregnancy. Home visits are repeated in cases where high maternal or fetal risk are detected, and for non-attenders. Reports are not available on the extent to which prenatal home visiting is arranged for registrants at private physicians' offices or at hospital out-patient departments other than the ONE clinics, although such a service is known to be available.

Special nurses pay at least one home visit within the first two postpartum months, and earlier and more frequently for high risk families.

Protective legislation assures that pregnant women who are employed receive 14 weeks of paid maternity leave. It usually is distributed six weeks before delivery and eight weeks after, although distribution can be rearranged so that all of it is taken postpartum. At least eight weeks postpartum leave is compulsory. Legislation does not assure that working women will be paid for time-off to attend prenatal clinics (this provision pertains to most of the other study countries). In the event of illness during or after pregnancy the period of paid leave can be extended on the physician's order. Night work for pregnant women is prohibited by law but exceptions can be made. Salary during perinatal leave is 79.5% of usual salary except in the event of illness when 100% salary is paid.

All hospital and other perinatal expenses are covered for all women. A cash birth allowance is given, even if the baby is stillborn, and a family allowance is paid to assist with the expenses of child rearing. Pregnant women are permitted to travel first class on railways when holding a second class ticket after the sixth month of pregnancy.

State employees may ask for an additional three months "breast-feeding leave." Salary is not paid during this period, but fringe benefits and eligibilities of employment continue. In addition a new mother may ask for up to two years of unpaid leave to care for her child—and up to six years if the child is handicapped. Special provisions are made for unmarried mothers. They may or may not "recognize" the baby; if not, adoption arrangements are made.

Prenatal care is ordinarily begun in the second, or at latest the third month of pregnancy. Visits are scheduled monthly up to the seventh month and then every two weeks for at least a total of seven prenatal visits. Registrants are also scheduled to attend three class sessions for which there is no fee. No penalties are imposed on non-attenders for prenatal care but the incentives are strong for pregnant women to avail themselves of the many benefits that associate with maternity care.

After delivery the infant, if cared for in the ONE clinics, visits the clinic weekly; if cared for privately the visits are ordinarily scheduled at monthly intervals. In 1980 the ONE clinics reported that 83 percent of all newborns attended their clinics at least once. ONE also conducts a national educational campaign about maternity care by distributing printed materials.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1930
Current law: 1967, 1969 and 1971 (means-tested allowances)

Employment-related system

Coverage
Gainfully occupied persons and social insurance beneficiaries with 1 or more children.

Special systems for public employees and self-employed persons.

Families not covered above eligible for means-tested allowances.

Source of Funds
Insured person: Employee, none. (For 1983, childless workers contribute 900 francs a month.) Self-employed, contributions varying with income and occupation.

Employer: 7% of payroll.

Government: Subsidies to employee and self-employed programs covering any deficits.

Qualifying Conditions
Child must be under age 14 (16 if unemployed, 21 if apprentice and 25 if student, unemployed young person replacing parent at home, or invalid. No limit for specified medical impairments.)

Eligible children may include dependent grandchildren, brothers, sisters, stepchildren, and other dependent minors.

Income limit for means-tested allowances: 43,074 francs a quarter with 1 child, increasing by 20% for each other child.

Cash Benefits

1,933 francs a month for 1st child (2,254 if child of old-age pensioner or unemployment beneficiary), 3,576 for 2nd (3,740 each for 1st and 2nd child of invalidity pensioners), 4,898 for 3rd, 4,995 for 4th, and 5,031 francs a month for 5th and each other child; increased by 362 francs for first child age 6-10, 638 francs if 10-14, and 1,032 francs a month if over age 14 (for 2nd and each other child, 423 francs, 744 francs, and 1,205 francs, respectively). Supplement for handicapped child under age 25: 8,192 francs a month. 14 payments a year. Birth grant: 24,672 for 1st birth, 17,016 for 2nd, and 9,153 francs for each other.

Means-tested allowance payable to families not eligible for regular allowances.

Periodic adjustment of benefits for wage and price changes and other economic factors.

Administration

Ministry of Social Welfare, general supervision.

National Social Security Office, collection of contributions.

National Family Allowance Office, distribution of contributions among individual funds.

Family allowances are paid by about 48 approved occupational and regional funds, auxiliary public fund for persons not otherwise covered, and several special funds.

*Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy. 1984.

DENMARK

The main features of health care in Denmark emphasize equal and almost free access to services irrespective of financial resources and social status. A National Insurance System, enrolling 95% of the population (Group I), gives free access to a general practitioner of the patient's choice, but choices can be changed only once a year. Group II enrollment, for the remaining 5% of the population gives free access to any practitioner but requires payment for part of the cost. General practitioners, each of whom cares for about 1800 patients, are not government employees, but are paid on the basis of agreements worked out between a public board and the doctors' union. The system is not actually an insurance plan, as that term is usually construed, because financing comes from general tax revenues rather than from premium payments. Midwives, who are government employees, play an important role in prenatal and postnatal care and for uncomplicated intrapartum care.

Since the mid-1970s priorities for allocation of resources have shifted from hospitals to primary community-based care and toward education for health-promoting behavior. The number of hospital beds per 100,000 population decreased by 15 percent from 1975 to 1984. During this period the physician/population ratio increased by one-fourth to 237 per 100,000 inhabitants, and the ratio of full-time employed qualified nurses to population increased from 460 to 610 per 100,000 inhabitants.

Responsibility for most health services lies with county and municipal governments according to standards that are promulgated at the national level. Municipalities are obligated to provide free home care as prescribed by physicians. Other obligatory services are public health nursing, school health and child dental care.

The number and distribution of medical specialists and general practitioners are regulated at the national level by negotiations between the National Health Insurance and the professional unions, with final approval of plans by the Minister of the Interior.

A study of mortality (1970-1980) showed only 10 percent difference in standardized mortality rates between the counties with the highest and those with the lowest rates. Neonatal mortality showed a narrowing of social difference between 1970 and 1977. The rate of low birth weight in 1983 was reported to be three percent.

Public health nurses monitor the health status of every child during the years of compulsory school attendance. Until recently school doctors were required in all school districts, and half their cost was covered by central government. National standards also call for guidance on contraception.

Government-operated primary care clinics have been substantially reduced in favor of enrollments with general practitioners. Each county is still required to maintain at least one public clinic, but these services are largely related to family planning and venereal diseases.

Maternity care begins with a visit to the general practitioner as soon as pregnancy is suspected. Subsequent visits conform to guidelines that were promulgated by the Minister of the Interior after extensive consultation with physicians, midwives,

and women's groups. The typical schedule involves visits to three different providers: general practitioner (26th and 35th weeks); midwives (16th, 30th, 33rd, 37th or 38th, and 39th or 40th weeks); and the hospital obstetrics department (20th and 36th weeks). The woman retains her medical record in order to facilitate exchange of information among the providers.

The recommended schedule of visits includes a home visit to every pregnant woman, ordinarily by the midwife or a home visiting nurse. A shortage of personnel does not permit these visits in all regions. Prenatal classes without fees are offered by all obstetric units and midwifery centers. About half of all pregnant women are thought to attend these classes.

Delivery ordinarily takes place in hospital, attended by a different staff from that which provided prenatal care. The Caesarean section rate is 10.3 percent. Home deliveries with attendance by a midwife can be arranged. In some areas plans have been completed for midwives to provide continuity of care including delivery in the local hospital, but those arrangements are atypical.

Within the first week after returning home postpartum the mother and baby are visited by the midwife. If the hospitalization was less than eight days, the public health nurse who will moniter the infant's progress may also make a home visit. Within eight weeks postpartum the mother and baby visit the general practitioner's office.

Usual pregnancy leave for working women is four weeks prior to delivery and 14 weeks after. During the period of leave the woman receives 90 percent of her usual earnings up to a maximum amount.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1952.

Current law: 1969.

Universal system.

Coverage
Resident citizens, aliens covered by EEC regulations or reciprocity agreements, and other aliens having resided in Denmark 1 year or more (3 years for special allowance) with 1 or more children. (1969 act also covers allowances for children under old-age, invalidity, and survivor (widow's) pension above, including orphans.)

Source of Funds
Insured person: None

Employer: None

Government: Whole cost

Qualifying Conditions
Child must be under age 16 (18 for special allowance, 16 or 17 for youth allowance).

Cash Benefits
Regular allowance, 2,184 kroner a year for each child. May be increased to 3,290 kroner per child under certain conditions, plus 2,580 kroner a year in single-parent families (reduced by 6% of income in excess of 156,000 kroner a year).

Special allowance: Full orphan, 9,612 kroner a year; half-orphans or children of old-age or invalidity pensioners, 5,781 kroner a year each.

Automatic adjustment of benefits each 6 months for changes in price index (adjustments suspended January 1, 1983—January 1, 1985).

Youth allowance: Up to 8,200 kroner a year per child if annual family income 76,000 kroner or less, youth's income 6,500 kroner or less (allowance reduced if youth earns 6,500-16,000 kroner a year). Schedule of payments individually determined.

Payable quarterly.

Administration
Ministry of Social Affairs and National Social Security Office, general supervision and national administration.

Administered by local communal (municipal) governments.

*Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy, 1984.

FEDERAL REPUBLIC OF GERMANY

(A complete description of perinatal care in the Federal Republic of Germany is available from Proceedings of the International Collaborative Effort on Perinatal and Infant Mortality, Vol. I, US/DHHS, PHS, NCHS, Aug. 1985.)

Health care is based on a scheme of sickness insurance that covers 98 percent of the population including foreign workers and their families. Membership in a sickness fund is obligatory for low income groups. Most people (90 percent) are members of the statutory insurance plan that pays health providers directly on the basis of fee for service contractual arrangements between the sickness funds and the service providers (physicians, pharmacists and hospitals). Most of the remainder

of the population are covered by private insurance. The statutory scheme is financed by equal contributions from employees and employers. Client payments for health care are negligible as indicated by the following data for 1981 on the sources of financing for health care:

Sickness funds	45%
Government budgets from all levels	13.5%
Employers	19.8%
Old age pension funds	8.0%
Accident insurance funds	3.3%
Private insurance funds	4.6%
Private payments	5.8%

Nearly all prenatal visits, as with other forms of primary care, take place in the offices of privately practicing physicians. Public clinics are not generally available and are usually confined to vaccinations, examinations of school children and control of infectious diseases. The number of physicians and social workers in public health offices has diminished steadily. In some areas prenatal care is available in the out-patient department of hospitals.

A mother's pass is issued at the first prenatal visit, entitling pregnant women to ten perinatal visits and one at six weeks postpartum. Until recently women who could provide documentation for at least ten visits were given a birth bonus of 100 DM (about $50) from the insurance company. The attendance requisite for the bonus has been discontinued and now all insured women receive it. Ninety-eight percent of pregnant women have a mother's pass at the time of delivery, indicating a high level of participation in prenatal care. Attendance by foreign workers is known to be lower. Their infant mortality rate is also higher (14.1 for foreign nationals in 1981 as compared with 11.3 among Germans).

Women have a choice about place of delivery, but more than 99 percent of deliveries take place in hospitals. Normal deliveries are often attended by midwives. The Caesarean section rate is 12.7 percent.

Women cannot be fired from their employment during pregnancy or for six months after. Employers are required to provide work which is non-strenuous and not scheduled at night or weekends. Women may take six weeks paid leave before delivery and are required to take eight weeks paid leave after delivery. A fixed part of the salary during maternity leave is paid by the insurance company; the employer is required to make up the difference. After the period of paid leave the mother is entitled to six months leave of absence with a guarantee of re-employment. Nursing mothers are entitled to two 30-minute nursing periods per day without cuts in pay. During this time the mother receives a stipend of 600 DM (about $300) per month paid by the insurance company. Fathers who stay home to care for their infants receive the same payment as mothers. The insurance funds make payment for household assistance during the first post-partum weeks if no family members are available to help.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1954.

Current law: 1974

Universal system.

Coverage
Residents with 1 or more children.

Special provisions for foreign workers with children living abroad.

Source of Funds
Insured person: None

Employer: None

Government: Whole cost

Qualifying Conditions
Child must be under age 16 (16 and 17 if unemployed, registered with an employment office and in occupational training, 27 if student, no limit if invalid). Regular family allowance, income test for students and trainees over 16.

Cash Benefits
Family allowances: DM 50 a month for 1st child, DM 100 for 2nd, DM 220 for 3rd, and DM 240 a month for each other child.

(Lower rates payable to foreign workers in Germany whose children reside in countries where cost of living is lower.)

Partial family allowance if receiving child's supplement: Difference between family allowance and supplement where allowance per child is greater.

Administration
Federal Ministry of Labor and Social Affairs, general supervision.

Federal Institute for Labor, administration of allowances through regional and local offices.

*Taken from *Social Security Programs Throughout the World—1983*, Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy, 1984.

FRANCE

(Report is incomplete. Response to EURO Survey was not on file. Important information was taken from chapters by Blondel and by Buekens in *Perinatal Care Delivery Systems. Description and Evaluation in European Community Countries,* edited by Kaminski, et al., forthcoming from Oxford University Press.)

Health services in France are financed through one of Europe's most highly developed social security systems. In 1980, 99.2 percent of the population was covered by social security, which finances about three-fourths of the cost of medical care. Insured people are expected to make a financial contribution of their own but in many instances this is covered by enrollment in private insurance or in friendly societies. In 1980 about 50 percent of the people reported that their health expenditures were reimbursed in full.

Everyone has free choice of medical care provider. They include:

- general practitioners and practicing specialists who work individually or, increasingly, in small groups.
- public or private hospitals and outpatient clinics. Private hospitals may be run either by voluntary non-profit agencies, or by profit-making establishments.
- a small number of public health centers, not everywhere available, and run by agencies of local government or by friendly societies. These clinics are ordinarily approved for financing under the social security system.

Almost all pregnancies and childbearing are under medical supervision. Midwives may provide care in hospital clinics or in community health centers but nearly all prenatal care is rendered by obstetricians or general practitioners in private practice. Care is often shared with visits to hospital clinics. Prenatal attendance at hospital clinics has been increasing (26.6 percent in 1981) as the proportion of care by general practitioners has been declining. Women of low socioeconomic class, low education, and unmarried women are more likely to visit a general practitioner than a specialist. Immigrant women are more likely than native French women to obtain care from the public health clinics. Along with these visits 43 percent of immigrant pregnant women were seen at least once prenatally by obstetric hospital staff.

A financial incentive is designed to promote attendance for prenatal care. Women who have made at least three prenatal visits receive a cash payment at the time of delivery. This stipulation is not regularly enforced, and evidence is by no means conclusive that improved prenatal attendance took place as a direct consequence of the financial incentives. Home visiting is not a consistent feature of prenatal care although it has been used with promising results for stress reduction among an experimental group of women who threatened premature labor (Papiernik et al, 1974).

Almost all deliveries take place in hospitals; the Caesarean section rate was reported in 1981 to be 10.9 percent. Details on duration of hospitalization and postnatal care are not available. A sharp reduction in infant mortality rate and in the rate of low birthweight occurred between 1970 and 1982.

Maternity leaves with grants and family allowance benefits are generous. Ninety percent of a working woman's earnings are paid for leave extending six weeks before delivery and ten weeks after. Payments are extended for longer duration for third and subsequent children. Additional allowances are paid to nursing mothers. Special upbringing allowances are paid to couples who take a year off for childrearing. A national family allowance fund makes low interest loans to young or large families in modest circumstances.

The recommended number of prenatal visits is seven; according to one study the average number of visits was 5.9, and only 0.6 percent of pregnant women received no prenatal care. Attendance for prenatal care improved sharply between 1972 and 1981. In 1978, 95% of French women in all age groups began prenatal care in the first trimester. Only 11 percent of pregnant women under 20 years of age had their first visit after the third month of pregnancy; 10 percent of immigrants had their first visit after the third month. Working women attend earlier and have more visits than non-working women.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1932

Current law: 1946 as amended through 1982.

Universal system.

Coverage
Family allowances: Families with 2 or more children.

Family supplement: Resident families with 1 or more children.

Prenatal allowance and birth grant: Resident mothers.

Guaranteed minimum family income: Resident families with 3 or more dependent children.

Special systems for agricultural, railroad and public utility employees.

Source of Funds

Insured person: None (except self-employed who pay 9% of income).

Employer: 9% of payroll.

Government: 1% of 1982 personal income tax surcharge (for 1983 only, with possible extension).

Maximum earnings for contribution purposes: 88,920 francs a year.

Qualifying Conditions

Child must be under age 16 (17 if earnings not greater than 55% of legal minimum wage; 20 if apprentice, student, invalid or female working at home).

Parent must have worked at least 1,200 hours in last year or 120 hours in last month.

Prenatal allowance and birth grant: Prescribed medical examinations.

Family supplement (income-tested): 1 child under age 3; otherwise at least 3 children.

Guaranteed minimum family income (income-tested): At least 3 dependent children.

Cash Benefits

23% of "base wage" (1,093 francs a month) for 2nd child, 42% for 3rd, 37.5% for 4th, and 35.5% for each other child; plus 9% per child age 10—15, 16% if over age 15.

Family supplement (income-tested): 455 francs a month.

Prenatal allowance: 22% of "base wage" for 9 months, payable in 3 installments.

Birth grant: 260% of "base wage" for first 2 births, 717% for each other birth. Payable in 3 installments.

Allowances adjusted annually for cost-of-living changes.

Guaranteed minimum family income: Varies with family income and number of children.

Administration

Ministry of Health and Social Security, general supervision and issuance of regulations.

National Family Allowances Fund, coordination of funds and financial equalization; bipartite governing body.

Family allowances funds, administration of program for individual districts and occupations, managed by bipartite boards.

*Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy. 1984.

IRELAND

High birth and emigration rates cause the demographic profile for Ireland to widen in the young age groups and shrink for the productive middle years. High unemployment (17 percent) and budget deficits place constraints on the health service budget which has been held constant in real terms in recent years. The non-capital share of gross national product devoted to health care shrank from 8 percent in 1980 to 7.4 percent in 1984. Important health system reforms were instituted in the 1970s and maternity benefits were expanded in 1981. In the intervening years infant mortality has fallen markedly from 19.5 to 10.1 (1984) and maternal mortality from 25.2 to 4.2 (1981).

Health care in Ireland is available to the whole population free of charge, or with small charges in some instances. Three categories of eligibility vary according to income: Category 1 patients (approximately 38% of the population) are entitled to the full range of health services without charge; Category 2 (approximately 47% of the population, ordinarily with annual incomes less than about $10,000 at 1982 conversions), are entitled to free in-patient and out-patient care in public wards and clinics (inculding free maternity and infant care), assistance toward the cost of prescribed medications, and free drugs for certain long-term illnesses; Category 3 (ordinarily with incomes above $10,000 at 1982 rates) have the same entitlements as Category 2, except for maternity and infant care, and an obligation to pay hospital consultants' fees. In addition one-third of the population subscribes to a voluntary health insurance system for which these individuals pay tax deductible premiums. The proceeds from a two percent tax levied on cigarette advertising are allocated to public programs of health education.

Prior to the 1970s salaried general practitioners served specified populations. Under the reorganization eligible patients can choose a doctor who is remunerated on a fee-for-service basis except for perinatal care which consists of lump sum payment for all visits.

Community Care Program covers non-institutional care including immunizations, maternity, infant and child care, services for the elderly and handicapped, welfare services, and aspects of environmental protection. These services are delivered in 32 defined Community Care Areas by multidisciplinary teams, which coordinate their work with general practitioners, hospitals and voluntary agencies on a local basis. A network of district hospitals (20-40 beds), county hospitals (200 beds) and regional hospitals (500-600 beds) provide a gradient of in-patient care of increasing complexity. An effort is underway to reduce hospitalization in favor of community care.

Responsibility for health services is vested with the Minister of Health, who in 1986 was also the Minister of Social Welfare. Administration and local delivery of services, including environmental protection, public health and personal social services are vested with eight regional health boards. These boards were established in 1971, superseding 26 county and a number of urban authorities. The local boards are comprised of elected local officials (a majority), elected representatives of the health professions, and a few persons nominated by the Minister. The affairs of the local boards are conducted under the responsibility of a chief executive officer, who supervises the work of managers for the general hospital, the special hospitals, and the community care programs.

Funding for health care comes almost entirely from general tax revenues. The decrease in gross national product committed to health care is associated with efforts to expand community and home-based care and to reduce hospitalization. Between 1975 and 1984 the resource to population ratios changed appreciably:

dentists	13% increase
physicians	23% increase
nurses	45% increase
midwives	89% decrease
hospital beds	13% decrease

The public health nursing service is available free of charge to the entire population with special emphasis on perinatal care, child health and care of the elderly. The clients of the home visiting service increased by 50 percent between 1975 and 1983.

Since 1978 approximately 30 multifunction health centers have been built; many others have been upgraded, and some sub-centers have been established. Over 900 premises are used as centers for community health services.

The community health centers typically provide comprehensive services which include medical, dental, public health, social work, community welfare, speech therapy, and accommodation for specialist consultation. General practitioners are urged to become involved in health centers as part of an integrated approach to primary care. Welfare services available at the community clinics include social care work for deprived children and families, cash allowances for the disabled and emergency assistance for the impoverished. Publicly funded voluntary agencies assist with these endeavors. Cash allowance and payments have recently increased in real value despite the nation's financial difficulties.

Traditionally the general practitioner has played a key role in primary care, but in recent years the growth of community centers has tended to isolate the general practitioner, particularly from primary and preventive services. The public health nurse plays a critical role for promoting continuity of care involving hospitals, general practitioners and community health workers. Continuity is further facilitated by having pregnant women and young mothers retain copies of their medical records.

Maternity and infant care are provided without charge to persons in categories I and II of the health care system. Routine services include care by a family doctor during pregnancy, all necessary hospital services, and care by the family doctor for mother and infant during six weeks after delivery. Each health board maintains a list of doctors who have entered into agreement with the board to provide perinatal services. The expectant mother selects from this list the doctor of her choice who is willing to accept her as a patient. Early commencement of care is usual. The pattern of visits ordinarily includes:

- a visit as near as possible to the 16th week of pregnancy, and seldom later than the 28th week.
- five antenatal examinations in addition to the first visit.
- such other examinations as the medical practitioner thinks appropriate.
- home visiting by the public health nurse is not routine prenatally, but is done for non-attenders and for special risks (e.g., diabetic mothers).
- attendance of the physician at the confinement if either the physician or the midwife thinks it necessary.

Nearly all deliveries take place in hospital. Offical *policy promotes* deliveries in maternity units with obstetric consultants and with effective means of coordination with community nursing services. Midwives attend all normal deliveries and some complicated ones, such as breech presentations. The Caesarean section rate is seven percent. Six neonatal intensive care units are available.

The postnatal routine includes attendance by the physician at least once in the week following delivery, and any other visits or examinations that are deemed necessary. A public health nurse makes a home visit at least once in the first week at home. In addition to checking on home circumstances and instructing on infant care, the visitor checks results and arranges follow-up for the infant's screening tests (e.g., phenylketonuria).

A sequence of health services is available free of charge to all preschool and primary national school children. Included are:

- developmental pediatric examinations at 6 months, 12 months and 24 months of age. Child welfare clinics offering these examinations are usually present in towns with populations of 5,000 or more. Services of a local public health nurse are available in rural areas to advise mothers to arrange for medical examinations that are deemed necessary.
- a comprehensive medical examination for all entrants to national schools (6 years of age).
- selective medical examination of children 9-10 years of age and at any age if parents, teacher or public health nurse is concerned on health grounds.
- routine annual screening for vision, hearing, cleanliness, and posture are carried out by the public health nurse.

Treatment for dental, aural, and ophthalmic defects and for all other defects discovered at these examinations is provided free of charge.

In practice the site of prenatal care varies under different circumstances. In the cities the majority of pregnant women attend the clinics for prenatal care, sometimes alternating visits with the general practitioner. In rural areas women mostly visit the general practitioner for prenatal care and may go to the hospital antenatal clinic once or twice late in pregnancy. Some hospitals send teams to remote areas to conduct weekly antenatal clinics.

According to the Family Planning Act of 1979 the Health Boards may advise on only the rhythm method of contraception. General practitioners may prescribe any method, and the minister has given special "consent" to nine family planning clinics (only one in a rural area) to give information and advice on any contraceptive method. Abortions are not legal, but are available in neighboring countries for those women who can afford transportation and costs.

Working women receive 14 weeks leave (six of them prenatally) at 80 percent of earnings; an additional four weeks unpaid postpartum leave is available if it is required. Paid time off from work is given for prenatal care.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1944

Current law: 1982.

Universal system.

Coverage
Residents with 1 or more children.

Source of Funds
Insured person: None

Employer: None

Government: Whole cost

Qualifying Conditions
Child must be under age 16 (18 if student or invalid).

Cash Benefits
£11.25 a month for 1st to 5th child; £17.50 for each additional child.

Birth grant: £300 on birth of triplets or £400 on birth on quadruplets.

Care for handicapped child: Maximum, £55 a month.

Administration
Department of Social Welfare, administration of allowances. Payments made through post offices.

*Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy, 1984.

NETHERLANDS

Health services in the Netherlands are financed by insurance and are rendered extensively by private practitioners including midwives. Official policy promotes home deliveries, a practice implemented by a generous system of home visiting. Public clinics

provide health care for most infants and children. The welfare system is reputed to have eliminated poverty even among traditionally hard-to-reach populations, such as foreign-born Dutch families (Surinamese and Indonesian) and among immigrant workers (North African). Together these groups make up less than six percent of the population. Less than a 20 percent spread separates the average wage from the minimum wage.

The country faces financial problems, with an unemployment rate of 16 percent (International Herald Tribune, 1986), and sharply diminished revenue from natural gas. The high proportion of the population living on state benefits (25 percent in Amsterdam, according to the International Herald Tribune, 29 Oct, 1986) has prompted a reexamination of benefits and eligibilities under social security. The Dutch currently pay a higher proportion of taxes—44.2 percent—on social security than any other European nation. Economies for health services feature an effort to reduce hospitalization by expanding community and home-based services. These changes are made in the context of a recent constitutional affirmation that health care is a social right. Dutch determination to fulfill that right is exemplified by the provision of free interpretations that are available by means of telephone linkages whenever a health care provider and a client confront a language barrier.

Everyone in the Netherlands is insured by one or more social insurance schemes. Three basic public plans are authorized by statute and are implemented by an independent council. These plans, covering 70 percent of the population, entitle participants to free care by general practitioners, by specialists including midwives, by dentists, and to free medications and free nursing care in general or psychiatry hospitals. The first of the basic plans, Compulsory Health Insurance, is required of everyone with a annual income less than 47,850 guilders (about $21,000). Family members, including students and disabled persons, if not themselves employed, are also covered. Premiums paid to the health insurance fund are 9.7 percent of the insured person's wage up to a fixed limit, paid half each by worker and employer. A separate health insurance plan applies to persons over 65 years of age with income less than 23,685 guilders (about $10,500). Voluntary health insurance, also public, is open to those who are not covered by the compulsory plan but whose income is below the fixed limit. The largest groups covered by the voluntary plan are the self-employed and civil servants.

Persons not covered by any of these three public schemes may take out insurance with a private company. An Exceptional Medical Expenses Act provides a national insurance scheme for everyone regardless of income to cover long-term illness or serious disability beyond the means of ordinary insurance coverage or self-pay. The premium for this coverage is 4.5 percent of wages paid by the employer.

Distribution of expenditures for health care is as follows:

Source of Financing	Percent of Total
Public health insurance	44.5%
Exceptional medical expenses coverage (public)	27.5%
Self pay, including private insurance	23.3%
Direct government programs	4.5%
Other	0.2%

Consistent with a tradition that health care providers derive from private and often charitable initiatives, hospitals are currently managed either by religious sects, by voluntary agencies, by national government or in a few instances by municipal government. Current policy calls for a reduction in the number of hospital beds from 4.7 per 1000 population to 3.0 or less per 1000. These plans are made in conjunction with efforts to decentralize health care and to expand community and home services that are required to comply with central standards and norms.

The decentralization of health care is planned around three echelons. The basic echelon includes local public health services, and some non-governmental organizations, such as the home nursing units. Services cover preventive and educational endeavors, such as immunization, school medical and dental services, crèches and kindergartens, and tuberculosis and venereal disease treatment and control.

The next echelon for primary care features general practitioners, supplemented by home nursing, ambulatory mental health care and social case work for personal or family problems. These services currently tend to cluster together into health centers that are organized on a voluntary basis, although most general practitioners continue to work in solitary practice.

The echelon for all in-patient and out-patient

hospital services includes the elaborate medical diagnostic and treatment technologies.

The basic and primary levels of care are scheduled for strengthening, especially with expanded home nursing, in order to ease the financial demands of secondary care. Health care expenditures have not increased since 1984; 29 percent are committed to primary care.

General practitioners play a crucial role. Almost everyone is registered with one, and consults there first for access to other providers such as physician specialists or midwives. Specialists ordinarily work from the out-patient departments of hospitals. About 25 percent of specialists are salaried on hospital staffs; the remainder work on a fee-for-service basis. Midwives work largely out of private offices with a clientele referred by general practitioners who represent the point of entry for maternity care.

Dutch women have a number of options, all of them of carefully protected quality, for perinatal care and childbearing. After first consulting the general practitioner and confirming the pregnancy, plans may be made for delivery and postpartum care at home or in hospital by general practitioner, obstetrician, or highly skilled midwife. Yet another option provides for delivery at hospital without formal admission (a policlinic delivery) and return home within thirty-six hours to take advantage of extensive postpartum domiciliary services. About 30 percent of deliveries follow this pattern.

The proportion of deliveries at home has fallen over the years, but now holds steady at about 35 percent. It is an option that is encouraged by official insurance policy which will not pay full cost for hospital delivery in the absence of a medical indication compatible with well-established criteria. Similarly, insurance will not pay the cost of deliveries and care by obstetricians unless medical indications require it.

Prenatal care takes place in the offices of general practitioners or midwives for about 60 percent of pregnant women, and for the others in hospital out-patient clinics attended by obstetricians. Only a few patients are seen in community clinics. The average number of visits for normal pregnancies is 10; for high risk deliveries it is 12. The number of women who fail to participate in this program is not known, but it is thought to be very small. Prenatal home visits are made by general practitioners or midwives only in exceptional circumstances, or when women fail to keep appointments. The maternity welfare worker visits the home eight weeks prior to delivery if home delivery is anticipated.

Midwives and obstetricians each attend a little more than 40 percent of all deliveries; general practitioners attend less than 20 percent and their share continues to fall. Some professional rivalries and tensions are brought into play, and in the process general practitioners appear to be squeezed out of maternity care. Midwives sometimes accuse obstetricians of medicalizing a normally physiologic process in order to take advantage of financing policies that appear to reward for identifying medical complications and risks. Even so, the Caesarean section rate is held at an impressively low 4.9 percent.

The most impressive aspect of Dutch maternity services is the postpartum care. The lying-in period is 10 days, either at home or in hospital. Average length of hospitalized obstetric patients is 8.4 days. Women who deliver at home or in policlinic are visited at home by a caretaker for up to eight hours a day for the first 10 days postpartum. Currently the average total number of hours of postnatal home visiting by Maternity Home Help is 64. Discussions are taking place on the feasibility of reducing these visits to seven days as an economy measure. The home visitor helps care for the infant and mother, advises on infant care, and assists with housekeeping, shopping and care of other family members. The maternity welfare worker who provides these services has received 16 months of training. For some populations a modest charge (about $20 in 1986) is made for home help.

The general practitioner or midwife who attended the delivery visits the mother and baby at home sometimes during the first week postpartum. Arrangements are completed for attendance at a well-baby clinic at four weeks. Ninety percent of new babies attend.

Maternity leave for working women provides full usual salary for six weeks before delivery and six after. Night work is prohibited during pregnancy.

Care of infants and children receives special attention. Baby and preschool clinics are organized and run by the Cross Societies. These are publicly funded, independent organizations for home nursing and maternal and child health care. There are 3,000 clinics for babies and more than 2,000 for preschool children. Only a very small proportion of infants and children are cared for outside the clinics by general practitioners or

pediatricians. Clinics are staffed by 2,000 doctors, working part-time. During the first year of life babies are brought to the clinics ten times on average. From age one until four or six years children visit the clinics about five times, after which the school doctor becomes responsible. About 98% of preschool children, 100% of primary school children, and 90% of secondary school children receive medical care through the school health system. As might be expected, the immunization rates for infants are well above 95%.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1939

Current law: 1962 (3 laws for employees, self-employed, and residents).

Dual universal and employment-related systems.

Coverage
All residents with 1 or more children.

Source of Funds Insured person: Employees, none. Self-employed and nonemployed persons, 4.6% of net income.

Employer: 4.6% of payroll.

Government: None

Maximum earnings for contribution purposes: 61,150 guilders a year.

Qualifying Conditions
Child must be under age 16 (27 if student and 18 if invalid).

Cash Benefits
Family allowances: Range from 146.62 guilders per quarter for families with 1 child under 3 years of age to 568.67 guilders per quarter per child for families with 8 children between 12 and 17 years of age.

Automatic adjustment twice a year for changes in net minimum wages (except for benefits payable to 1st child).

Administration
Social Insurance Council, general supervision, tripartite membership.

Industrial associations, administration of allowances within each industry; larger employers pay allowances to own employees and settle surplus or deficit of contributions due with association.

Social Insurance Bank, administration of allowances for nonemployees and pensioners, with assistance of regional labor councils.

*Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy. 1984.

NORWAY

(A complete description of perinatal care in Norway is available from Proceedings of the International Collaborative Effort on Perinatal and Infant Mortality, Vol. I, US/DHHS, PHS, NCHS, Aug. 1985).

Provisions of health services in Norway is complicated by low population density and relative isolation of many small communities. Important assets include an exceedingly low unemployment rate that never went above three percent during the worldwide recession of the early 1980's, high per capita gross national product ($13,000 in 1983), and nearly universal literacy. Health services are financed and regulated through a state insurance system that has been compulsory since 1911.

The basic tenets of health care feature equitable access to health care for everyone and provision of services at the lowest effective level of care. State funds for health services are distributed on an age-specific basis, requiring that at least 10 percent of total government support must be allocated for mother and child health care. Health planning, oversight, and statutory regulation of health services take place at the national level. The 1982 Act on Municipal Health Services provides funds for local health care on a three to one match and entrusts to 454 local municipalities the planning for the form and management of health services. Plans for local implementation are subject to state review and comment. Each municipality is required to provide at least one health center staffed by general practitioners, physiotherapists and nurses. The counties, 19 in number, are responsible for hospitals and for specialty services, both within and outside hospitals.

Primary health care, including pre- and post-natal care, is sharply divided from hospital care. Primary practitioners, almost entirely general practitioners, have no access to hospitals. Specialists are almost always hospital based, sometimes in policlinics for out-patient consultation. All deliveries, except for the inadvertent ones, take place in hospitals and are normally attended by midwives. Delivery at maternity homes, run by midwives, has sharply declined over the past decade. The national

Caesarean section rate is nine percent. The duration of hospital confinement in nearly always five to seven days. Patients are required to pay a small part of some medical services except for those associated with childbearing which are always free.

Almost 100 percent of pregnant women attend prenatal care, a large majority before the 12th week. The average number of visits is between 10 and 14 for every part of the country. No overt financial inducements or penalties are associated with attendance at prenatal care.

Pregnant women may choose prenatal care from any of four sources: a privately practicing general practitioner, a privately practicing obstetrician, a local urban or rural health center, or a hospital out-patient clinic. Except in Oslo, where many women attend the health centers, attendance in the offices of general practitioners predominates by far. Attendance at health centers is thought to be increasing but precise data are not available. In 1979 the 454 municipalities operated 1,309 health centers, of which 257 offered prenatal care, often provided by midwives on the clinic staff. All of the municipalities offered antenatal preparatory classes.

Home visiting is not normally a part of prenatal care. District health nurses make postnatal visits for the purpose of guiding and advising on infant care; assessing living conditions; assisting with access to other community services; and providing information of follow-up visits, especially to health centers for immunizations.

Maternity leaves are provided to working mothers covering 100 percent of earnings payable for 108 days, of which at least 36 must be postnatal. Alternatively the father may care for the infant up to 72 days and receive benefits based on his earnings. Pregnant women are given paid time off for prenatal visits. For women who live in remote areas all expenses for ten days and nights are paid for a stay just prior to delivery near the maternity institution.

Usual family allowances provide about $25 per month (1982 conversions) for the first child and an increasing amount for subsequent children up to $40 per month for the fifth and later children. Single mothers receive additional benefits including a birth payment to assist with the cost of equipment and clothing for the baby, extra pay for living expenses, education pay, pay for child care while the mother is at school or work, loans if necessary, priority in day care centers, and one year's leave from work during the child's first year of life. Note should be made that even with these benefits childbearing among 15- to 19-year-old women has fallen markedly since 1972.

Instruction about sexuality, including contraception, is extensively provided in the schools, in the medical columns of weekly magazines and occasionally on television and radio.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First and current law: 1946

Universal system.

Coverage
All resident children.

Source of Funds
Insured person: None

Employer: None

Government: Whole cost

Qualifying Conditions
Child must be under age 16.

Cash Benefits
3,816 kroner a year for 1st child in family, 4,644 kroner for 2nd, 5,772 kroner for 3rd, 6,204 kroner for 4th, and 6,516 kroner for each additional child. Sole supporter receives benefits for an additional child.

Payable monthly.

Administration
Ministry of Social Affairs, general supervision.

National Insurance Administration, national administration of programs and supervision of local offices.

Local insurance offices, administration of allowances locally.

*Taken from *Social Security Programs Throughout the World—1983*, Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy, 1984.

SPAIN

(Substantial parts of the following report are taken from a letter provided by Dr. Isabel Alvarez, Madrid).

The democratization of Spain in 1978 came at the same time as the Alma Ata Conference (WHO)

on primary health care. The perspectives of that conference, emphasizing universality of primary health care, had an impact on health planning in Spain (WHO, 1986). The 1985 Spanish General Law on Health provides a basis for implementing a strategy that gives the entire population access to health care. Even prior to this statute efforts to protect the nation's health were substantial. The first social security law was passed in 1938, with substantial expansions in 1974. Under the terms of these laws the right to good health is protected by participation of 95 percent of the population in the social security system. Another 5 percent are covered through private schemes or through the welfare system (Alvarez, 1987).

Factors other than health care have contributed to improvements in health status. Spain's economy has strengthened with its shift from an agricultural emphasis to the eleventh rank among industrial powers. These changes have been associated with urbanization, higher incomes, better education, and improved access to essential services.

The social security system assures health coverage through the INS (National Institute of Health). Created for workers as a part of the effort toward industrialization, health care has been progressively extended to other populations. Private sector care has diminished as health care agencies within the social security system have grown rapidly. More than 400 health centers, Primary Health Integrated Units, staffed with multidisciplinary teams, have become major providers in both urban and rural areas. During 1984-85 access was expanded by opening 150 new units. They are staffed by general practitioners, pediatricians, social workers, dentists, family planning counselors, and psychiatric workers. About one-third of the nation's physicians and one-fifth of the nurses work in primary health care.

In the span of less than a decade the infant mortality rate has improved to a position among the most favored nations in the world. Even in Barcelona, noted for population diversity and the presence of slum barrios, the overall infant mortality rate is an impressive eight per 1,000 live births, with a rate in one of the poorest barrios of only 17.

Expenditures for primary health care increased by 160 percent between 1982 and 1985. Most of these expenditures occured within the social security system, and represent a reallocation within existing budgetary levels. In 1984 the proportion of GNP devoted to health was 4.6 percent; major increases are not likely although efforts are underway to correct inequalities of resource distribution.

The new health system is organized around 17 autonomous communities, each of which is responsible for implementing health programs. Within the regional communities, health zones are established, requiring health centers and a secondary level hospital for each zone of about 200,000 inhabitants. A different network of 280 centers provides family planning services.

National legislation gives patients freedom to select their own general practitioner or health center and their own hospital. Another provision of the legislation requires hospital-based specialists to provide consultations for the Primary Health Integrated Units.

A pregnant woman may attend an INS outpatient facility from the moment she suspects being pregnant. Usual practice is to seek care more or less at the end of the first trimester. A national campaign was launched in 1985 to encourage an earlier attendance.

There is not a mandatory or standard number of visits. The recommended number is 10. In these visits, tests for rubella, toxoplasmosis, Rh, and other similar conditions are performed. All data are written down in a "pregnancy document". High risk pregnancies are referred to hospitals.

Upon labor, the woman will go to a preestablished hospital where the attending obstetrician and midwife will not be the same providers who gave prenatal care. The woman will carry with her the "pregnancy document" in which all relevant data are stated. In case of emergency, she may go to another INS hospital, to another public sector hospital or, if no public hospital is near enough, she may go to a private one, pay the fee and later be refunded by the INS. The usual duration of hospital stay for delivery is two or three days.

About 96 percent of the childbearing population receives care in the INS system, the remainder being cared for privately.

All newborn infants needing intensive care, if born outside the INS network, are referred to the nearest INS hospital with a neonatal intensive care unit, that is, if the private hospital lacks such a facility. This is not very important now, with the high coverage reached by social security, but it was important during the 1960s and 1970s when all

newborns, covered or not by the INS provisions, could be transferred to the INS or public sector perinatal care units.

Maternity benefits include 75 percent coverage for earnings (tax free) during leave that extends from six weeks before to eight weeks after delivery. A pregnant woman may choose to redistribute the leave periods before and after birth to suit her own convenience. She may take leave for a period not longer than three years without pay from the moment the child is born, and has the right to obtain her post after this period. For this, she must have worked in the same company for no less than a year. This right may also be taken by the father if the family prefers.

Women who breast feed are released from work twice a day for 30 minutes for nine months. No proportional reduction in salary is allowed.

Whoever directly cares for a child under age six or for a handicapped child has the right to decrease the working day by one-third to one-half with proportional reduction in salary.

A pregnant woman may visit the health facility within working hours without reduction in salary. Upon birth of the child, the father has the right of paid leave for three days. A cash payment is made for each birth; every newly married couple receives a marriage grant.

Family planning services have been widely available since 1984. Marriage and the rate of childbearing between 15 and 19 years of age are substantially higher than for other Western European nations in the study. The Spanish experience is consistent with observations that with adequate supports and services childbearing in this age group is not accompanied by biological risks to favorable pregnancy outcomes.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1938
Current law: 1974
Employment-related system

Coverage
Employees in industry and commerce and pensioners with 1 or more children.

Special systems for agricultural employees and small farmers, domestic servants, railway employees, salesmen, nonagricultural self-employed, seamen, miners, and certain other occupations.

Source of Funds
Insured person: See contributions for old age, invalidity, death above.
Employer: Same.
Government: Same.

Qualifying Conditions
Child must be under age 18 (no limit if invalid). No minimum contribution requirement.

Allowance also payable for wife or invalid husband.

Cash Benefits
250 pesetas a month for each child. 375 pesetas a month for spouse.

Temporary assistance available for other needy dependents.

Grant for large family.

Birth grant: Lump sum of 3,000 pesetas for each birth.

Marriage grant: 6,000 pesetas.

Administration
Ministries of Labor and of Health and Social Security, general supervision.

National Institute of Social Security and General Social Security Treasury, national administration of program.

*Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy. 1984.

SWITZERLAND

Switzerland relies extensively on private and voluntary endeavors to maintain a high standard of health care. Pauperism is virtually unknown; the per capita annual income is the highest in the world. Health insurance for all people is not compulsory, but 97.4 percent of the population is enrolled in either public or private programs. More than 400 companies offer private health insurance which is subjected to close governmental scrutiny. Minimal coverage is defined by government statutes. The law allows these plans to require about 10 percent self-pay, except for hospitalization and maternity care for which coverage must be complete. Wage earners have compulsory insurance against accidents and job-related illnesses. Old age and survivors' health insurance, financed by contributions from employers and wage earners, is compulsory.

Most hospitals in Switzerland are public in the sense that they are run by the governments of cantons or communities. Physicians in most

hospitals and in public service are salaried. Physicians outside of these systems provide care independently according to contractual agreements with the insurance funds which specify fixed fee schedules. Every person has the right of free choice of physicians.

The laws which regulate insurance pertain largely to sickness care, with one major exception. Standards of prenatal care are specifically defined in the statutes; the insurance companies receive federal subsidies in order to fulfill this provision. Four prenatal visits are specified by the insurance laws, but in practice most pregnant women make more visits. In the absence of specific medical indication additional visits might be made at the client's expense.

Less than five percent of pregnant women are thought to receive inadequate prenatal care. About 80 percent of all visits are made to the private offices of practicing physicians, either obstetricians or general practitioners in about equal proportions. The remainder are made to the maternity outpatient clinics of hospitals.

Almost all deliveries take place in hospitals, many of which employ midwives to attend deliveries. Midwives normally work only in hospitals. The Caesarean section rate is 10 percent.

Home visits are made during the prenatal period only for medically defined risks, or if the pregnant woman requests a visit and presents an acceptable justification. After delivery a home visit is routinely made at least once within the first 14 days after hospital discharge, and again at four months. The home visitor is a nurse with training in maternity and infant care. Infant and child health care are normally supervised by physician practitioners.

Maternity leaves are not regulated but usually extend for eight weeks. Night work during pregnancy is allowed only with the woman's consent.

Modest family allowances (about $35 per month at 1983 exchange rates) are paid to families for each child in order to help with the expenses of child rearing. Single mothers receive family benefits. A new mother who breast feeds is given a special allowance which varies in amount from one canton to another but which can be as much as $140 (1983 exchange rates) for three weeks of breast feeding.

A nationwide system of prenatal classes is organized by a nongovernmental agency, *Pro Juventute*. An attendance fee is usually required.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program

First and current federal law: 1952 (agriculture only).

Cantonal laws: All cantons have laws, enacted during or after 1943.

Employment-related system

Coverage

Federal program: Agricultural employees and small self-employed farmers with 1 or more children (family allowance) or who are married (household allowance).

Cantonal programs; Nonagricultural employees with 1 or more children; several cantons also cover some self-employed, including farmers. Employers usually affiliate with family allowance funds; in some cantons, employers may guarantee payment.

Special systems for public employees.

Source of Funds

Insured person: None

Employer: Agricultural employers, 2% of payroll (federal program). Nonagricultural employers, 1.4% to 3.5% of payroll, according to canton and fund (cantonal programs).

Government: Federal and cantonal governments share residual cost for agricultural employees and whole cost for small farmers.

Qualifying Conditions

Federal program, child must be under age 16 (20 if invalid, 25 if student); most cantonal programs, child must be under 16-18 (up to 25 if student or invalid).

Self-employed farmers must have income below specified levels.

Cash Benefits

Federal program, 70 francs a month (mountains) or 60 francs (elsewhere) for each of first 2 children; for 3rd and each other child, 80 francs a month (mountains) or 70 francs (elsewhere). Also, household allowance of 100 francs for every married employee.

Cantonal programs: Legal minimum, 70 to 130 francs a month for each child according to canton. Funds often pay higher amount than legal minimum. Birth grants (200-660 francs a month) and higher education allowance (100-180 francs a month) in some cantons.

Administration

Federal program: Cantonal old-age and survivors' insurance funds collect contributions and pay allowances.

Cantonal programs: Administered by numerous public and approved private family allowance funds, supervised by cantonal governments. Employers usually pay allowances with wages and settle only surplus or deficit with fund.

•Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy, 1984.

UNITED KINGDOM

Health care in the United Kingdom relies on social security income transfers for reducing the effects of poverty, a medical care system that requires each person's registration with a general practitioner, and extensive community and school-based support services for children, the elderly, and the handicapped. Hospitals, almost in their entirety, are owned and operated by the National Health Service. Hospital specialist staffs are salaried, but often maintain a part-time private consultative practice. General practitioners do not generally have direct access to hospitals. Practitioner services are rendered according to guidelines and capitation payments negotiated between professional groups and the National Health Service. The National Health Service is supported almost entirely from taxation revenues. Services are for the most part free to clients, exceptions relating to partial payment for some medications.

Tensions surround the level of support for the National Health Service and its efficiency of operation. When it was established in 1948 it represented one of the world's most ambitious and comprehensive systems of care. It required about the same proportion of gross national product as health care in other industrialized nations and appeared to offer more complete access than in many other countries. In the intervening years other nations have increased, in many cases doubled, the proportionate share of resources committed to health services but the U.K.'s share has stayed at a low 6.1 percent, one of the lowest in Europe.

An admirable accomplishment of the National Health Service is universal participation in essential basic services. Critics of present economies in the British system point out that a twofold difference in perinatal mortality separates the highest and lowest social classes, and the gap is widening. (Black, 1985). Long delays are known to associate with procedures that are deemed to be elective. About 30 percent of the total budget is assigned to primary care.

Traditionally general practitioners worked in individual office-based practices, but over the past two decades aggregations in groups of four or more have become commonplace in population-dense areas. In addition to these practices many local health authorities have established health centers staffed with general practitioners, health visitors, and district health nurses. In 1983 there were 1,400 health centers; their work features close collaboration with school health and community psychiatric personnel.

Over 98 percent of childbearing takes place in hospitals, with attendance in most instances (76 percent) by a midwife. In many communities trained midwives are available to attend home deliveries. This is an alternative that has markedly diminished (33.2 percent in 1960; less than one percent in 1985). The Caesarean section rate is 10.1 percent (Wales and England).

Typically a pregnant woman will first visit the general practitioner with whom she is registered. Early in pregnancy the delivery will be booked at the hospital of the woman's choice. She will then attend a booking clinic at that hospital where careful examinations and various screening tests will be performed. If any risks are identified the woman will continue attendance at the hospital clinic; otherwise she returns for further prenatal visits to the general practitioner or community clinic. After about the 32nd week of gestation, visits are transferred to the hospital clinic according to arrangements that are made by local agreement. Normally, pregnant women will make 12 prenatal visits altogether, and more if risks are identified. Communications between the hospital clinic and the general practitioner are facilitated by a partial medical record which the women carries. Special arrangements may be made in hardship areas for obstetric consultants to travel to the community for consultative clinics. In some housing developments with a concentration of high risk populations special antenatal clinics, attended by general practitioners, obstetric consultants, and health visitors may be conducted.

Some differences in usual procedure pertain to Scotland. No public prenatal clinics exist in Scotland, where women are invariably attended by a general practitioner. In England and Wales prenatal home visiting is initiated most commonly as a check on non-attenders. In Scotland a community midwife attends and counsels every pregnant woman at home. Women who are booked for home delivery are visited by the community midwife at home every two weeks until the 32nd week of pregnancy, and then weekly until delivery.

Postnatally in all parts of the U.K. the midwife is expected to visit at home each day for a minimum of 10 days after delivery. If the confinement took place at home the midwife visits twice on the first and third days, and once daily thereafter. The health visitor continues home visits when the midwife ceases to call.

Pregnant women who are employed are forbidden night work during the first pregnancy. They are given paid time off for prenatal visits and for attendance at prenatal classes which are readily available and well attended. Maternity leave is authorized for 11 weeks before and seven weeks after confinement with the amount of pay graduated according to income up to a maximum. A lump sum maternity grant is made (about $40 in 1982) and a family allowance of about $16 per week is paid for the first child and about $10 per week for each subsequent child.

FAMILY ALLOWANCES*

Date of Basic Law and Type of Program
First law: 1945
Current law: 1985
Universal system

Coverage
Residents with 1 or more children.

Source of Funds
Insured person: None
Employer: None
Government: Whole cost

Qualifying Conditions
Family allowances: Child must be under age 16 (19 if student in higher education).

26 weeks of residence in last 52 weeks.

Cash Benefits
£5.85 a week for each child, plus £3.65 supplement for first child of single parent.

Administration
Department of Health and Social Security, administration through its central and local offices.

*Taken from *Social Security Programs Throughout the World—1983*. Research Report No. 59, USDHHS, Social Security Administration, Office of Research, Statistics, and International Policy. 1984.

Citations

Abel-Smith B. 1985. Who Is the Odd Man Out?: The Experience of Western Europe in Containing the Costs of Health Care. *Milbank Memorial Fund Quarterly 63*(1):1-17.

Alvarez, I. 1987. Letter and enclosures, Hospital Ramon y Cajal, Madrid, 20 Mar.

Anderson, O. 1972. *Health Care: Can There Be Equity? The United States, Sweden, and England.* John Wiley and Sons, New York.

Bergsjo, P., Schmidt, E., and Pusch, D. 1986. Differences in the Reported Frequencies of Some Obstetrical Interventions in Europe. In *Perinatal Health Services in Europe: Searching for Better Childbirth.* Ed. by Phaff, J.M.L., Croom Helm, London.

Black, S. R. 1985. Poverty in the Cradle. *Brit. J. Med.* 290 (4 May):1340-1342.

Blondel, B. 1986. Forthcoming. Antenatal Care in the European Community Countries Over the Last 20 Years. In *Perinatal Care Delivery Systems: Description and Evaluation in European Community Countries.* Ed. Kaminski, M., Breart, G., Buekens, P., et al. Oxford University Press.

Blondel, B., Pusch, D., and Schmidt, E. 1985. Some Characteristics of Antenatal Care in 13 European Countries. *Brit. Jour. of Obstetrics and Gynaecology 92*(6):565-568.

Buekens, P. 1986a. Personal communication, Ecole de Santé Publique, Université Libre de Bruxelles, 24 Sept., 1986.

Buekens, P. 1986b. Forthcoming. Determinants of Prenatal Care. In *Perinatal Care Delivery Systems: Description and Evaluation in European Community Countries.* Ed. Kaminski, M., Breart, G., Buekens, P., et al. Oxford University Press.

Buekens, P. 1987. Personal communication in a letter responding to drafts of this paper. 2 Mar. 1987.

Children's Defense Fund, 1986. Congress Enacts Important New Investments in Children and Families. *Bulletin,* Oct. 20, 1986; Washington, DC.

Children's Defense Fund, 1987. *The Health of America's Children: Maternal and Child Health Data Book.* Washington, DC.

Committee on Ways and Means. 1984. Effects of the Omnibus Budget Reconciliation Act of 1981, Welfare Changes and the Recession on Poverty. U.S. House of Representatives. Washington, DC.

Doornbos, J.P.R. and Nordbeck, H.J. 1985. *Perinatal Mortality, Obstetric Risk Factors in a Community of Mixed Ethnic Origin in Amsterdam.* B.V. Dordrecht, Amsterdam.

Gold, R. and Kenny, A. 1985. Paying for Maternity Care. *Family Planning Perspectives 17*(3):103-111.

Greenberg, R. 1983. The Impact of Prenatal Care in Different Social Groups. *Am. J. Obstet. and Gynecol. 145*(7):797-801.

Haanes-Olsen, L. 1972. Children's Allowances: Their Size and Structure in Five Countries. *Social Security Bulletin,* May 1972, pp. 17-28.

Houd, S., and Oakley, A. 1986. Alternative Perinatal Services. In *Perinatal Health Services in Europe: Searching for Better Childbirth.* Ed. Phaff, J.M.L. Croom Helm, London.

Ierodiaconou, E. 1986. Maternity Protection in 22 European Countries. In *Perinatal Health Services in Europe: Searching for Better Childbirth.* Ed. Phaff, J.M.L. Croom Helm, London.

Institute of Medicine. 1985. *Preventing Low Birthweight.* National Academy Press, Washington, DC.

International Herald Tribune, 1986. Special Report, 29 Oct.

Jones, E.F., Forrest, J.D., Goldman, N., et al. 1985.

Teenage Pregnancy in Developed Countries: Determinants and Policy Implications. *Family Planning Perspectives 17*(2):53-63.

Kaminski, M., Breart, G., Buekens, P., et al. 1986. Forthcoming. *Perinatal Care Delivery Systems: Description and Evaluation in European Community Countries.* Oxford University Press.

Kamerman, S.B. Kahn, A.J., and Kingston P. 1983. *Maternity Policies and Working Women.* Columbia Univ. Press, New York.

Kenney, A.M., Torres, A., Dittes, N., and Macias, J. 1986 Medicaid Expenditures for Maternity and Newborn Care in America. *Family Planning Perspectives, 18*:103-106.

Maxwell, J. 1984. Prenatal Care and Infant Mortality: The French Experience. Processed.

Miller, C.A. 1985. Infant Mortality in the U.S. *Sci. Am. 253*(1):31-37.

Miller, C.A., Fine, A., Adams-Taylor, S., and Schorr, L.B. 1986. *Monitoring Children's Health: Key Indicators.* American Public Health Association, Washington, DC.

Montoya, M. 1987. Infant Deaths and the Magnitude of Labor Force Participation. Vth International Congress, World Federation of Public Health Association.s Mexico City, March 25.

National Center for Health Statistics. 1985a. *Health United States, 1985.* U.S. Department of Health and Human Services, Hyattsville, MD.

National Center for Health Statistics. 1985b. Proceedings of the International Collaborative Effort on Perinatal and Infant Mortality, Vol. I. U.S. Department of Health and Human Services. Hyattsville, MD.

Newland, K, 1981. Infant Mortality and the Health of Societies. Worldwatch Paper 47, Worldwatch Institute, Washington, DC.

North Carolina Division of Health Services. 1986. Consolidated Plan for Public Health Services FY87. Department of Human Resources, Raleigh.

Notzen, F., Placek, P., and Taffel, S. 1987. Comparisons of National Caesarean Section Rates. *N. Engl. J. Med. 316*(7):386-389.

Orr, M.T. and Forrest, J.D. 1985. The Availability of Reproductive Health Services from U.S. Private Physicians. *Family Planning Perspectives 17*:63-69.

Papiernik, E. and Kaminski, M.H. 1974. Multifactorial study of the risk of prematurity at 32 weeks gestation. I. A Study of the frequency of 30 predictive characteristics. *J. Perinat. Med.* 2:30-36.

Phaff, J.M.L. 1986. *Perinatal Health Services in Europe: Searching for Better Childbirth.* Croom Helm, London.

Placek, P. 1986. Commentary: Caesarean Rate Still Rising. *Statistical Bulletin 67*(3):9.

Roemer, M.I., 1976. *Health Care Systems in World Perspective.* Health Administration Press, Ann Arbor, MI.

Smedby, B. and Ericson, A. 1979. Perinatal Mortality Among Children of Immigrant Mothers in Sweden. *Acta Paediatr. Scand. Suppl.* 275:41-46.

Social Security Administration. 1984. *Social Security Programs Throughout the World—1983.* Research Report No. 59. U.S. Department of Health and Human Services, Washington, DC.

Starfield, B. and Budetti, P. 1985. Child Health Status and Risk Factors. Health Services Research 19(6, Part II):817-886.

UNICEF. 1986. *State of the World's Children, 1984.* Oxford.

UNICEF. 1987. *The State of the World's Children 1987.* Oxford.

United Nations. 1973 and 1983. *Demographic Yearbook.* New York.

Vandenbussche, P., Wollast, E., and Buekens, P. 1985. Some characteristics of Antenatal Care in 13 European Countries. *Brit. J. Obstet. & Gynaecol.* 92:1297.

Verbrugge, H.P. 1987. Staatstoezicht OP DE Volksgezondheid, Rijswijk, Netherlands. Letter to author after review of this manuscript. Jan. 22.

Wallace, H.M. 1975. *Health Care of Mothers and Children in National Health Services.* Ballinger, Cambridge, MA.

Woolhandler, S. and Himmelstein, D. 1985. Militarism and Mortality: An International Analysis of Arms Spending and Infant Death Rates. *The Lancet,* (15 Jun):1375-1378.

World Bank. 1986. *World Development Report,* Oxford.

World Health Organization, 1986. Forthcoming. *7th Annual Report on the World Health Situation.* Geneva.

World Health Organization Regional Office for Europe (EURO). 1985. *Having A Baby in Europe.* Copenhagen.